

Bayer

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SUPERFUND DIV.
REMEDIAL BRANCH
(ESF-R)



March 1, 2013

VIA OVERNIGHT DELIVERY

Mr. Lance Nixon, Enforcement Officer
Superfund Enforcement Assessment Section (68F-TE)
US EPA, Region 6
1445 Ross Avenue
Dallas, Texas 75202-2733

Chintan K. Amin
Senior Counsel
Corporate Law

**Re: Cedar Chemical Corporation Superfund Site
West Helena, Phillips County Arkansas – SSID No. 06NH
January 14, 2013 CERCLA Section 104(e) Information Request**

Dear Mr. Nixon:

We are responding to the referenced letter, which Bayer CropScience LP (“BCS”) received on January 22, 2013, and subsequently by me (the “*Information Request*”). On January 31, 2013, Mr. Marvin Benton, Sr. Staff Attorney for EPA, granted an extension to BCS allowing it to respond on or before March 1, 2013. BCS sets forth its responses to the Information Request related to the above-referenced NPL Site (the “*Site*”) below:

Bayer Corporation
100 Bayer Road, Building 5,
Ground Floor
Pittsburgh, PA 15205-9741

Phone: 412 777-2715
Fax: 412 777-4740
chintan.amin.b@bayer.com

Preliminary Statement

BCS is willing to work with USEPA to provide it with information to the extent that it is relevant and reasonably obtained, subject to the following objections. (the “*General Objections*”):

A. BCS asserts all applicable privileges and protections it has with regard to USEPA’s enumerated inquiries including the attorney-client privilege, the attorney work product doctrine, materials generated in anticipation of litigation, and privileges for materials which are proprietary, company confidential, or trade secret. CERCLA does not require a party to divulge such information in response to information requests;

B. BCS objects to the requests on the grounds that the requests use undefined terms and are overbroad, vague, ambiguous, irrelevant and unduly burdensome so as to exceed statutory authority under CERCLA and contravene BCS’s constitutional rights. In responding to these requests, BCS relies on the definition of these terms as they are commonly used (*i.e.*, their dictionary definitions);

C. BCS objects to the requests on the grounds that the requests are overbroad and unduly burdensome in that they seek information about a

Site that BCS neither owned nor operated. As such each of these requests exceeds USEPA's statutory authority under CERCLA and contravenes BCS's rights;

D. BCS objects to any requirement to produce documents or information already in the possession of a government agency, or already in the public domain. Such requirement is duplicative and, therefore, unduly burdensome;

E. BCS hereby disavows any obligation to supplement these responses on an ongoing basis. CERCLA Section 104(e)(2) authorizes USEPA to require submission of information upon reasonable notice. BCS conducted a review of available records that was practicable given the time period BCS had to respond to this request and has supplied information concerning the facilities which was found during that review. If more information is desired, BCS respectfully requests further reasonable notice that such information is desired;

F. BCS objects to the requests to the extent they call for BCS to make a legal conclusion concerning BCS's potential liability under CERCLA for the Site, which liability is not admitted but is expressly denied;

G. BCS objects to the requests to the extent they seek trade secrets or other confidential business information; and

H. Notwithstanding and without waiving these objections, and subject to them, BCS has prepared this response based upon the information available to it. Where the requests are considered vague, ambiguous, overbroad, unduly burdensome, or beyond the scope of USEPA's authority pursuant to Section 104(e) of CERCLA, BCS is making appropriate and reasonable efforts to provide responsive information based on BCS's interpretation of the requests. To the extent that information submitted herein is not required by law or is otherwise outside the scope of USEPA's 104(e) authority, that information is voluntarily submitted. BCS waives no rights or protection as to information it voluntarily submits.

Bayer CropScience LP's Responses

Without waiving any of the foregoing General Objections, BCS answers as follows:

- 1. Please provide the full legal name, mailing address, and phone number of the Respondent.**

Bayer CropScience Inc.
2 TW Alexander Drive
Research Triangle Park, NC 27709

2. For each person answering these questions on behalf of the Respondent provide full name, title, business address, and business telephone and fax number.

Chintan Amin
Sr. Counsel
Bayer Corporation
100 Bayer Road
Pittsburgh, PA 15205
Tel: +1 412 777 2715

Leslie Pegram
Paralegal
Bayer CropScience LP
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Research Triangle Park, NC 27709
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Mike Cockrill
VP of Supply Chain
Bayer CropScience LP
2 TW Alexander Drive
Research Triangle Park, NC 27709
Tel: + 1 919 549 2413
Fax: +1 919 549 2500

3. If the respondent wishes to designate an individual for all future correspondence concerning this Site, including legal notices, please provide the individual's name, address, telephone number, and fax number.

Chintan K. Amin
Sr. Counsel
Bayer Corporation
100 Bayer Road
Pittsburgh, PA 15241
412-777-2715
chintan.amin@bayer.com

4. Please explain the business relationship between your company and Cedar Chemical Corporation.

Based upon available documents and interviews with employees with knowledge, Cedar Chemical was a contract manufacturer of at least one active ingredient for Aventis CropScience Inc. ("ACS") and Rhône-Poulenc Ag-Company, Inc. ("R-P"). Upon information and belief, this relationship began in 1997. Further to this arrangement, it appears that

R-P agreed to supply certain quantities of Ethephon to Micro Flo Company by assuming an Ethephon Supply Agreement dated January 1, 1996 between Micro Flo Company and Cedar Chemical Corporation. It appears that the relationship between Cedar and ACS, which succeeded R-P, ceased in approximately 2001 or 2002. ACS and R-P are predecessors to Bayer CropScience Inc. by name change.

Further, it appears that Cedar Chemical Corporation purchased certain raw materials from Bayer Corporation as inputs into its chemical production operations. At the time, Bayer Corporation was not related to either ACS or R-P.

5. Identify all transactions with the Site owners and/or operators of the Site that resulted in materials being sent to the Site by you for any purpose. Identify and provide all documents related to each transaction, including but not limited to invoices, manifests, shipping papers, bills of lading, receipts, log book entries, trip tickets, work orders, contracts documents showing the nature of the materials involved, and any EPA and/or State environmental filings or correspondence. For each transaction, identify and state:

- a. **The type and purpose for the transaction;**
- b. **A description of the materials involved, including their quantity and chemical content and characteristics;**
- c. **Any amounts paid by you in connection with each transaction;**
- d. **The date of each transaction; and**
- e. **The date the materials were sent to the Site.**

BCS objects to this request on the grounds that it is overbroad, vague, ambiguous, irrelevant and unduly burdensome so as to exceed statutory authority under CERCLA and contravene BCS's constitutional rights. Without waiving the foregoing objections and the General Objections, BCS has conducted a reasonably diligent review of its files, and attaches documents that are relevant, responsive and non-privileged.

6. Provide a copy of the tolling agreement between your company and Cedar Chemical, including any restatements, amendments, or other documents. If there are any other tolling agreements, or joint operating agreements, with other companies, provide copies of such agreements.

Without waiving the General Objections, BCS has conducted a reasonably diligent review of its files, and attaches documents that are relevant, responsive and non-privileged. Other than the tolling or

contract manufacturing relationship described above, BCS cannot speculate about the relationships between Cedar Chemical Corporation and any other company.

7. Identify all persons, including you, who may have arranged to have the raw materials mixed at Cedar Chemical Inc. In addition identify the owner of the hazardous materials involved in each such arrangement.

BCS objects to this request on the grounds that it is overbroad, vague, ambiguous, irrelevant and unduly burdensome so as to exceed statutory authority under CERCLA and contravene BCS's constitutional rights. Without waiving this objection and its General Objections, other than the tolling or contract manufacturing relationship described above, BCS cannot speculate about the relationships between Cedar Chemical Corporation and any other company.

8. If any of the documents solicited in this information request are no longer available, please indicate the reason why they are no longer available.

BCS maintains a document retention policy pursuant to which some potentially responsive documents may have been destroyed.

Additionally, while BCS has made a reasonable effort to retrieve certain documents, we are experiencing technical difficulties with certain electronic files. We will continue to make efforts to recover these files and supplement this response with hard copies as soon as practicable. However, we may provide you with electronic files if these efforts are not successful within a reasonable amount of time. The documents affected are as follows:

Document ID	Document Title	Number of Pages
AB000006068	Bayer Corporation - Cedar Chemical - Manufacturing Drawback Entry Certificate - 3,4 Dichloroaniline	128
AB0000029050	Rhone Poulenc - Safety Data Sheet - Dichloro-2,4 Aniline	10
AB0000008570	Straight Bill of Lading - Short Form - DCA, Sulfuric Acid, Dichlorobenzene, Methanol, 3,4-DCA, Diuron, Phosphorus Trichloride, Propanil, Tromethamine, Telene Rim Polymers, Ethylene Dichloride, etc.	1413
AB0000032828	Cedar Chemical - Bills of Lading; Gilscot Guidroz - Propanil 4, Propanil 36%, Propanil Technical; Blackhawk - Propanil 36%, Propanil 4, Ricesolo; DHL Terminal - Propanil Technical;	182

	Bernuth Lines - Propanil 36%, Propanil 4; Riceco - Propanil 4; Farm Services - Propanil 4	
AB0000076654	Cedar Chemical Corporation West Helena Plant Monthly Financial Review Report for the Month Ending December 31, 2000	384
AB0000032072	Cedar Chemical - Bills of Lading; DSI - Dichlorophenyl Isocyanates; Mobile Process - Spent Beds; Cymetech - Kerosene, Dicyclopentadiene; Blackhawk - Propanil Technical, Telene Rim Polymers, Diuron; Miller Terminal - Methanol, Nitric Acid; BFI - RCRA Empty Containers; Matlack Terminal - Dicyclopentadiene, R118118, Stam M-4; Queen City Barrel - Drums (Dicyclopentadiene); Albemarle - Aluminum Alkyl Halides; Sygenta - Ordram Technical; Reverse Route - Ortho Dichlorobenzene, Acetic Anhydride; Cypress Chemical - Sulfuric Acid; Rineco - Dichloroanilines, Methanol, Xylene, Maleic Anhydride, DCPD, CPD, Heptane, Kerosene; Cedar Chemical - 3,4-DCA, Tromethamine; Gilsco Guidroz - Dichlorophenyl Isocyanates; Rohn & Haas - Stam M-4 Herbicide; Morton International - 3,4-DCA; Boasso - Tromethamine; Sigma Chemical - Tromethamine; Ashland Distributing - Heptane, Polybutadiene; Drexel Chemical - Diuron; Trash Hunters - Cut up hoses from Bldg. 5	594

Please contact me if you have any questions or concerns.

Sincerely,

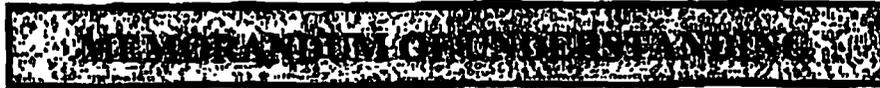


Chintan K. Amin
Sr. Counsel
Bayer Corporation

Enclosures

cc: Mr. Robert Lockemer
Ms. Leslie Pegram

File Cyclo Anilide



THIS MEMORANDUM OF UNDERSTANDING is made and entered into as of the date last below written, by and between

Cedar Chemical Corporation, a Delaware corporation, having its principal place of business at Suite 2414 Clark Tower, 5100 Poplar Avenue, Memphis, Tennessee 38137 (hereinafter referred to as "CEDAR"),

and

Rhône-Poulenc Agro Matières Actives, a French "société en nom collectif" having its registered office at 14/20, rue Pierre Balzet -69009 LYON-France (hereinafter referred to as "Rhône-Poulenc"),

Witnesseth:

- ◆ **WHEREAS, Rhône-Poulenc desires to retain an independent third party contractor to toll manufacture for it Cyclanilide (1-(2,4-dichlorophenyliminocarbonyl)-cyclopropane carboxylic acid) (hereinafter "Product") from 2,4 DCA (2,4 Dichloro aniline) (hereinafter "DCA") and (cyclopropane- 1,1-dicarboxylic acid dimethyl ether (CPDM) (hereinafter "CPDM"), DCA and CPDM together with Sodium Methoxide (hereinafter "NaMO") being sometimes referred collectively herein as the "Raw Materials"; and**
- ◆ **WHEREAS, CEDAR owns and operates a chemical manufacturing facility located at West Helena, Arkansas which, following installation of certain capital improvements and equipment estimated to cost approximately \$750,000 (the "Capital Improvements"), is deemed capable of producing Product from DCA and CPDM utilizing Rhône-Poulenc's manufacturing process (the "Process") disclosed by Rhône-Poulenc to Cedar pursuant to a Secrecy Agreement between Rhône-Poulenc and Cedar dated as of May 14, 1999 (the "Secrecy Agreement"); and processes disclosed to Cedar pursuant to a Secrecy Agreement between Rhône-Poulenc and Cedar dated as of November 22, 1999 (the "Degussa Secrecy Agreement").**
- ◆ **WHEREAS, it is agreed that CEDAR and Rhône-Poulenc shall promptly commence negotiations with each other in good faith with the intent of reaching**

an agreement (the "Agreement") satisfactory in form and substance to their respective managements and incorporating the terms and principles set forth herein.

NOW, THEREFORE, in consideration of the premises and the terms and conditions herein contained, the Parties agree as follows:

Article 1 - Purpose. The purpose of this Memorandum of Understanding is to set forth the terms and principles under which the parties will negotiate in good faith with the objective of entering into a toll manufacturing and supply Agreement whereby Cedar will produce Product for Rhone-Poulenc, and under which Cedar will initiate engineering studies and make equipment purchase commitments to enable it to construct and complete the Capital Improvements in time to begin producing Product for Rhone-Poulenc in the fourth quarter of the year 2000 in the quantities and in accordance with the terms and conditions set forth herein.

Article 2 - Agreement. The parties intend to negotiate in good faith with the objective of entering into an Agreement which will include among other terms, the following provisions:

A. **Term.** The initial term shall be from the date of execution of the Agreement through December 31, 2003, consisting of an initial partial year period (the "Partial Year Period") and three (3) contract years (the "Contract Years"). The Partial Year Period shall be from the effective date of the Agreement through December 31, 2000, the first Contract Year (the "First Contract Year") shall be from January 1, 2001 through December 31, 2001, the second Contract Year (the "Second Contract Year") shall be from January 1, 2002 through December 31, 2002, and the last Contract Year (the "Last Contract Year") of the initial term shall be the period from January 1, 2003 through December 31, 2003. Thereafter, the term of the Agreement shall be renewed for successive two year periods unless terminated by either party upon notice to the other not less than one (1) year prior to the end of the initial term or one year prior to the end of any extension of the initial term of Agreement; provided that the Agreement shall not be so extended unless, prior to the end of the initial term or of any extended term, the parties will have negotiated and reached mutual agreement in respect of the terms of such extension (including the price and quantity).

B. **Raw Materials.** Rhone-Poulenc shall be responsible for supplying Cedar, at its cost, the Raw Materials in sufficient quantities to enable Cedar to produce, in continuous campaigns, scheduled in accordance with the provisions of Article 2D, all quantities of Product ordered by Rhone-Poulenc, provided that in the event Cedar is able to obtain a more favorable price than Rhone-Poulenc for purchase of NaMO, following prior approval from Rhone-Poulenc, Cedar shall purchase such

quantities of NaMO as shall be required for it to perform hereunder, but for the account of Rhone-Poulenc. Cedar shall supply, at its cost, all raw materials other than the Raw Materials and Rhone-Poulenc shall reimburse Cedar its actual cost for the purchase of such raw material within thirty (30) days following the date of Cedar's invoice, provided that Cedar shall in all cases employ a reasonable competitive purchasing process.

C. **Product.** Rhone-Poulenc shall order and Cedar shall produce from Raw Materials supplied by Rhone-Poulenc not less than four hundred twenty (420) metric tons of Product during the initial term of this Agreement. Not less than eighty (80) metric tons of Product shall be produced by Cedar for Rhone-Poulenc during the Partial Year Period. Rhone-Poulenc currently estimates that it will order approximately one hundred sixty (160) metric tons of Product during the First Contract Year. In the event Rhone-Poulenc shall not have ordered and purchased from Cedar at least four hundred twenty (420) metric tons of Product by the end of the Second Contract Year, subject to the terms hereof, it shall order the balance of its four hundred twenty (420) metric ton commitment from Cedar for production during the Last Contract Year.

D. **Scheduling.** Rhone-Poulenc shall submit its good faith estimate of its orders for Product to be produced by Cedar in each calendar year during the term hereof by no later than July 1 of the previous calendar year, provided that such estimate will be for the purpose of facilitating scheduling of manufacture only and will not be binding, provided that a firm order will be issued by Rhone-Poulenc by October 31 of such year. The quantity of Product to be produced by Cedar in the Partial Year Period, as specified in Paragraph C, shall be considered a firm order, provided that, if Rhone-Poulenc is not able to import sufficient quantities of Raw Materials in the United States for reasons beyond Rhone-Poulenc's control, Rhone-Poulenc shall have no minimum volume commitment for the Partial Year Period. Except for Product to be produced during the Partial Year Period, no production campaign scheduled by the parties in any Contract Year, shall be for less than one hundred fifty (150) metric tons, and only one production campaign shall be scheduled in each Contract Year. If Rhone-Poulenc fails to issue a firm order for at least one hundred fifty (150) metric tons of Product for production by Cedar in any Contract Year, Cedar will be relieved of any responsibility to produce Product for Rhone-Poulenc during such Contract Year, and shall have unrestricted use of its manufacturing facility, including the Capital Improvements, during such Contract Year.

E. **Raw Material Usage.** Maximum usage factors applicable to consumption of Raw Materials (expressed in kilograms of Raw Materials consumed per kilogram of Product) shall be determined based on actual results achieved during the production of the initial eighty (80) metric tons of Product during the Partial Contract

Year. Thereafter, any over-consumption of Raw Materials (of more than 3.5%) shall be for Cedar's account. The savings on any under-consumption of Raw Materials of more than 3.5% shall be shared equally by the parties.

F. **Capital Improvements.** Cedar's cost of Capital Improvements shall be amortized over the minimum four hundred twenty (420) metric tons of Product to be produced by Cedar and paid for by Rhone-Poulenc during the initial term of the Agreement. For example, if the agreed cost of the Capital Improvements for which Rhone-Poulenc shall be responsible is \$750,000.00, \$1.79 for each kilogram of Product purchased by Rhone-Poulenc from Cedar hereunder shall be credited to Rhone-Poulenc's obligation to reimburse Cedar's cost of Capital Improvements. The foregoing notwithstanding, Rhone-Poulenc shall in any event be responsible for reimbursing Cedar at least twenty percent (20%) of its cost of Capital Improvements by the December 31, 2001; an additional forty percent (40%) of its cost of Capital Improvements by December 31, 2002; and the balance of its costs of Capital Improvements by December 31, 2003.

G. **Startup.** Rhone-Poulenc shall provide reasonable technical assistance to Cedar during startup of the initial campaign.

H. **Waste Disposal.** The parties shall cooperate to determine the most cost effective and environmentally sound method to dispose of wastes generated by production of Product. Costs of waste disposal shall be for Rhone-Poulenc's account, provided that the cost of the waste disposal charge to Rhone-Poulenc shall not exceed a mutually agreed amount per kilogram of Product which will be determined by the parties prior to execution of the Agreement.

I. **Toll Fees.** Cedar's toll manufacturing fees for production of Product for Rhone-Poulenc during the initial term shall be \$8.00 per kilogram for all Product order for production beginning in the Partial Year Period. Thereafter, Cedar's toll manufacturing fees for Product order by Rhone-Poulenc in a Contract Year shall be (i) \$7.00 per kilogram if Rhone-Poulenc orders and purchases from Cedar between one hundred fifty (150) metric tons and two hundred (200) metric tons of Product during such Contract Year; and (ii) \$6.50 per kilogram if Rhone-Poulenc orders and purchases from Cedar more than two hundred (200) metric tons during such Contract Year. The parties shall agree on an escalation formula by which the fees set forth above (which fees include amounts relating to the depreciation of the Capital Improvements referred to in Article 2(F) above) may be adjusted annually starting with the Second Contract Year to reflect increases in manufacturing costs. Cedar shall invoice Rhone-Poulenc at the end of each month during the term of the Agreement for all quantities of Product produced during such month, at the applicable toll manufacturing fee, and for all raw materials (including NaMO) purchased by Cedar hereunder. Such invoices shall be due and payable by Rhone-Poulenc thirty (30) days from date of invoice.

J. **Miscellaneous.** The Agreement shall contain additional terms and provisions normally contained in agreements of this nature.

Article 3 - Schedule of Target Dates.

A. It is the parties' objective that on or before March 15, 2000, Cedar shall submit to Rhone-Poulenc detailed engineering drawings describing the Capital Improvements, and its final estimated cost to install the Capital Improvements and Rhone-Poulenc shall have delivered to Cedar its detailed specifications for Product and Raw Materials.

B. The parties to agree to work together with the goal of reaching, on or before March 15, 2000, final agreement concerning the documents describing the Capital Improvements, including the agreed cost of same to be amortized over the initial term of Agreement. The parties shall also work together with the objective of reaching written agreement as to the Product and Raw Material specifications. Once mutually agreed upon, such documents will be used as Exhibits to the Agreement. The Capital Improvements documents shall include a schedule of the costs incurred and to be incurred by Cedar while negotiation of the Agreement is pending. All such costs and contractual commitments incurred by Cedar as set out in such schedule of costs shall be for Rhone-Poulenc's account, either for amortization and reimbursement in accordance with the provisions of Article 2F hereinabove, or, alternatively, in the event that, following good faith negotiations, either party determines that it cannot reach agreement with the other party on the terms of the Agreement, or in any event the Agreement is not executed by the parties on or before May 1, 2000, or, if the Agreement is executed by the parties, but is subsequently terminated for reasons other than for default by Cedar prior to the end of the initial term, such costs (to the extent incurred by Cedar and unamortized) shall be paid in full by Rhone-Poulenc to Cedar upon the occurrence of any such event.

C. On or before April 1, 2000, Rhone-Poulenc shall prepare and deliver to Cedar a proposed first draft of the Agreement.

D. The parties will work together with the objective of submitting a final draft of the Agreement prior to their respective managements for approval on or before May 1, 2000.

Article 4 - Nature of Agreement. The provisions of this Memorandum of Understanding do not constitute and will not give rise to any legally binding obligation on the part of each of the parties except in respect to Articles 3.B, 5 and 6, which the parties intend to be binding.

Article 5 - Confidentiality. The parties hereby agree that any information exchanged pursuant hereto shall be subject to the provisions of the Secrecy Agreement and shall be considered "Confidential Information" as such term is defined in the Secrecy Agreement, provided that: (i) the parties hereby agree to extend the term of the Secrecy Agreement until December 31, 2000 and (ii) any information exchanged pursuant hereto which would constitute Degussa-Huls Confidential Information as such term is defined in the Degussa Secrecy Agreement, shall be subject to the Degussa Secrecy Agreement

Article 6 - Dispute Resolution. Applicable Law. All disputes arising in connection with the present Memorandum of Understanding shall be finally settled under the rules of Arbitration of the International Chamber of Commerce by one or more arbitrators appointed in accordance with the said Rules.

The arbitration shall be conducted in the English Language in New York City.

This Memorandum of Understanding shall be construed in accordance with and governed by the laws of the State of New York.

Executed by the parties, acting by and through their authorized representatives, as of the dates appearing below.

CEDAR CHEMICAL CORPORATION

By: _____

Date: _____

RHÔNE-POULENC AGRO MATIÈRES ACTIVES

By: _____

Date: _____

EM
8/22/86

CONTRACT FILE

BUTOXONE ACQUISITION

RHONE-POULENC INC - Agreement
effective January 1, 1983 (closing
date March 21, 1983).

DEADLINES, ETC.

VERTAC/RHONE-POULENC INC CONTRACT

Effective January 1, 1983,

<u>Date</u>	<u>Item</u>
March 21, 1983	Date of closing.
April 21, 1983	Deadline for delivery of files, records, etc., by Rhone-Poulenc to Vertac and Deadline for Vertac to inspect and inventory closing inventories and to notify Rhone-Poulenc of any defects or discrepancies.

Remaining Payments Due to Rhone-Poulenc

June 30, 1983	\$179,467.13 (for inventories)
July 31, 1983	\$304,467.13 (final payment)
January 1, 1986, and every 12 months thereafter to and including January 31, 1990	5% of Vertac's net sales of 2,4-DB end use product (f.o.b. manufacturer's plant) in the prior calendar years (1985-1989) - (for assets other than inventories)

Formulation Agreement

April 1, 1983, and first day of each calendar quarter thereafter	Vertac gives estimates of requirements of end use products (work orders on 10 days prior notice to Rhone-Poulenc)
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(NOTE: Terms of Formulation Agreement should be renegotiated effective August 1, 1983, if Vertac expects to rely on Rhone-Poulenc for formulation services thereafter, since Rhone-Poulenc has the right to close its plant after July 31, 1983, with no notice to Vertac.)

Formulation Fees

<u>Date</u>	<u>Item</u>
Payable 30 days after production or delivery date specified in Vertac work order.	
March 1, 1984	Rhone-Poulenc to notify Vertac of adjustments based on PPI increase or decrease.
July 31, 1990	Termination of all warranties and covenants except Rhone-Poulenc's covenant not to compete.
January 31, 1992	Termination of Rhone-Poulenc's covenant not to complete.

AGREEMENT

THIS AGREEMENT dated as of and effective the 1st day of January, 1983 by and between RHONE-POULENC, INC. a New York corporation (hereinafter called "R-P") and VERTAC CHEMICAL CORPORATION, a Delaware corporation (hereinafter called "Vertac").

WHEREAS, R-P desires to sell and Vertac desires to purchase all of R-P's assets associated with the manufacture, sale and use of herbicides containing 4-(2,4-Dichlorophenoxy) butyric acid ("2,4-DB") including salts and esters of 2,4-DB, but excluding R-P's manufacturing facilities (plant, property and equipment) and its accounts receivable;

NOW, THEREFORE, in consideration of the premises and the mutual covenants and agreements set forth herein, the parties agree as follows:

ARTICLE I. ASSETS BEING SOLD

1.1 Definitions. Subject to the terms and conditions of this Agreement, at the closing referred to herein (the "Closing") R-P shall sell, convey, assign, transfer and deliver to Vertac all right, title and interest in and to those assets owned by it and used or suitable for use in connection with the manufacturing, marketing, distribution, sale and use of 2,4-DB herbicide products, but excluding the equipment and related manufacturing facilities where R-P has heretofore manufactured, formulated, packaged and stored such products, and excluding R-P's accounts receivable from sales of such products prior to the date of Closing, such assets to be purchased and sold hereunder being

B. RMW

hereinafter collectively referred to as the "Assets", including specifically the following:

(a) The EPA and state pesticide registrations for all of R-P's technical products and end-use formulations containing the active ingredient 2,4-DB or the salts or esters thereof (hereinafter collectively the "Products") such registrations being identified or described in Exhibit "A" (the "Registrations") attached hereto.

(b) All scientific data, including toxicity, efficacy and other data developed by or for R-P for the purpose of supporting the Registrations including but not limited to such data heretofore submitted to EPA or any other governmental agency in the United States, as more particularly described in Exhibit "B" attached hereto (the "Registration Data"), together with all rights heretofore or hereafter accrued or accruing in connection therewith.

(c) The United States trademarks "Butoxone" and "Butoxone SB" identified in Exhibit "C" (the "Trademarks"), together with the goodwill and contract rights associated therewith.

(d) All confidential statements of formula, formulation recipes, manufacturing procedures, analytical specifications and methods, safety information and all manuals and related documents associated with the manufacture, formulation and packaging of Products (the "Manufacturing and Formulation Data").

(e) All research and engineering files, summaries and reports relating to the manufacture and uses of 2,4-DB (the "Process Data"), including but not limited to the information identified in Exhibit "D". *B.R.M.V*

(f) A current list of R-P's customers for the Products including the volumes purchased by each such customer, and all related customer files, for each of the calendar years 1980, 1981 and 1982 and for the current year to date (the "Customer Data").

(g) All of R-P's inventories of end-use Products in bulk and packaged in containers and labeled under EPA Registration Nos. 359-677, 359-358, 359-409, and 359-502, and all inventories of 2,4-DB and isooctyl ester and butyl ester of 2,4-DB as shall be on hand as of Closing (collectively the "Closing Inventories"). Attached hereto as Exhibit "E-1" is a schedule of R-P's Closing Inventories by quantity and location and costs per unit, and, as Exhibit "E-2", a schedule of R-P's sales of end-use Products from January 1, 1983 to date of Closing.

ARTICLE II. PRICE AND TERMS

2.1 Inventories. Subject to the terms and conditions of this Agreement and in reliance upon R-P's representations, warranties and agreements contained herein, Vertac shall pay R-P for the Closing Inventories purchased by Vertac hereunder, a total purchase price of Six Hundred Eight Thousand Nine Hundred Thirty-Four and 26/100 Dollars (\$608,934.26), determined and payable as follows:

(a) The total purchase price for the Closing Inventories purchased and sold hereunder has been determined as follows:

(i) Quantities of the Closing Inventories at the costs per unit scheduled in Exhibit "E-1" attached hereto; plus *RMV*

(ii) The total quantities of end-use Products sold by R-P between January 1, 1983 and the date of Closing at the aforesaid costs per unit; minus

(iii) Ninety-seven percent (97%) of the net sales prices (FOB R-P's plant) received or receivable by R-P as a result of such sales of end-use Products, all as disclosed in Exhibit "E-2".

(b) The total purchase price for Closing Inventories purchased and sold hereunder, as determined above, shall be due and payable by Vertac as follows:

(i) At Closing - One Hundred Twenty-Five Thousand Dollars (\$125,000.00), by certified check.

(ii) On or before June 30, 1983 - One Hundred Seventy-Nine Thousand Four Hundred Sixty-Seven and 13/100 Dollars (\$179,467.13) (Fifty percent (50%) of the total purchase price, less that sum paid by Vertac at Closing for Closing Inventories) by wire transfer to a bank to be designated by R-P.

(iii) On or before July 31, 1983 - The balance of the total purchase price for Closing Inventories purchased and sold hereunder, by wire transfer to a bank to be designated by R-P.

(c) Title to and risk of loss of all Closing Inventories shall pass to Vertac at the Closing. Closing Inventories located at R-P's plants or warehouses shall remain at such locations until July 31, 1983 at no charge to Vertac, and R-P shall tender such Inventories purchased by Vertac hereunder for shipment by common carrier at Vertac's expense from time to time

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after Closing as directed by Vertac. Vertac shall be responsible for storage charges with respect to Closing Inventories located at warehouses not owned by R-P from and after April 1, 1983. After July 31, 1983, R-P will bill Vertac for storage of Closing Inventories (end-use Products only) at R-P's plant sites at a fair and reasonable rate to be negotiated by the parties.

2.2 Assets Other Than Inventories. Subject to the terms of this Agreement and in reliance upon R-P's representations, warranties and agreements contained herein and in consideration of the sale, conveyance, assignment, transfer and delivery of all Assets with the exception of the Inventories described in Section 1.1. hereof, Vertac shall pay to R-P at Closing the sum of One Hundred Thousand Dollars (\$100,000.00), plus additional sums equal to five percent (5%) of the aggregate net sales price (FOB manufacturing plant, regardless of location) received by Vertac on the sales of all end-use Products in each calendar year beginning with the calendar year 1985 and in each calendar year thereafter to and including 1989, due and payable to R-P as follows:

(a) By not later than January 31, 1986 and January 31 of each year thereafter, to and including January 31, 1990, Vertac shall submit to R-P an accounting of Vertac's net sales of end-use Products during the immediately preceding calendar year, accompanied by payment due to R-P, determined in accordance with section 2.2 hereof.

(b) Vertac shall keep books and accounts or other suitable business records necessary for the computation of the

B RMV

payments due by Vertac to R-P hereunder. If R-P desires at any time to verify the computation of the payment due hereunder, Vertac shall make such records available to an independent accountant selected by R-P and reasonably acceptable to Vertac during regular business hours and upon reasonable notice.

ARTICLE III. FORMULATION AGREEMENT

3.1 Term/Requirements. From the date of Closing until July 31, 1984, R-P shall keep its formulating and packaging facilities at its plant at St. Joseph, Missouri (hereinafter the "Plant") available for the purpose of supplying Vertac with any or all of Vertac's requirements of end-use Products during the 1983 and 1984 selling seasons in accordance with the terms of this Article III. Notwithstanding the above, R-P may sell or close the Plant after July 31, 1983. In the event the Plant is closed or sold after July 31, 1983 but before July 31, 1984, R-P shall not be liable to Vertac for any damages that Vertac may incur as a result of such closing or sale.

3.2 (a) Work Orders. Beginning April 1, 1983 and on the first day of each successive calendar quarter during the term hereof, Vertac shall give R-P its best estimates of the quantities of end-use Products which Vertac will require that R-P produce during such quarter. Upon at least ten (10) days' prior written notice by Vertac to R-P during the term specified in Article 3.1 hereof, R-P shall formulate and package for Vertac end-use Products in minimum quantities of Five Thousand (5,000) gallons per order for delivery in accordance with such notices. *B RWV*

(b) The delay or failure of R-P to perform any obligation to be performed by it under 3.2(a), if caused by reason of force majeure, shall not constitute a default nor subject R-P to any liability to Vertac. The term "force majeure" shall mean any act of God or the public enemy; explosion; fires; storm; lightning; earthquake; flood; drought; strike; lockout or other labor troubles; federal, state or municipal law, regulation, order, priority requisition or allocation; or inability to acquire ingredienets or packaging materials or interruption, failure or delay of transportation for reasons beyond the reasonable control of R-P. R-P will use its best effort to correct and remove a force majeure condition which affects performance under 3.2(a).

3.3 Materials/Consumption Standards. Vertac shall supply R-P with all 2,4-DB required to produce end-use Products ordered by Vertac hereunder and R-P shall reimburse Vertac Vertac's costs of any such 2,4-DB consumed or lost in the manufacturing process in excess of the consumption ratios identified in Exhibit "F". Other materials, including inert ingredients, packaging materials and the like, shall be supplied and consumed by R-P under terms described in Exhibit "F".

3.4 Fees. Vertac shall pay to R-P for the materials supplied and its services in accordance with this Article III the fees per gallon of end-use Products determined in accordance with collective Exhibit "F".

3.5 Production Schedule/Terms of Payment. All Products produced by R-P for Vertac in accordance with this Article

B RWV

III shall be delivered or held for delivery to Vertac at the Plant not later than the date specified in Vertac's purchase order and the fees due to R-P hereunder shall be payable by Vertac within thirty (30) days thereafter.

3.6 Storage. During the term hereof, R-P shall store all 2,4-DB purchased by Vertac and delivered to the Plant and shall also store end-use Products produced by R-P in quantities up to Ten Thousand (10,000) gallons at no additional charge to Vertac. For any quantities of end-use Products stored by R-P at any time in excess of Ten Thousand (10,000) gallons, Vertac agrees to pay R-P a fair and reasonable warehouse fee.

3.7 Warranties. All Products produced by R-P for Vertac hereunder shall meet the same specifications and quality standards applicable to such Products produced by R-P from the effective date hereof to the date of Closing, and all 2,4-DB supplied by Vertac shall meet A. H. Marks' standard specifications.

ARTICLE IV. REPRESENTATIONS, WARRANTIES AND COVENANTS

4.1 R-P's Representations, Warranties and Covenants.

R-P represents and warrants to Vertac as follows:

(a) R-P is a corporation duly organized, validly existing and in good standing under the laws of the State of New York and has all requisite corporate power and authority to enter into this Agreement and to carry out the transactions contemplated herein.

(b) R-P has good, valid and marketable title to the Assets and has complete and unrestricted power and the unquali-

fied right to sell, convey, assign, transfer and deliver such Assets to Vertac at the Closing hereunder. The assignments and other instruments to be executed and delivered by R-P to Vertac at the Closing will, when executed and delivered, effectively vest in Vertac good, valid and marketable title to the Assets, free and clear of any lien or encumbrance. The information and data contained in the Exhibits to this Agreement are true and correct.

(c) R-P is not aware of any condition or state of facts or circumstances which would create a risk of having a material adverse effect on the business conducted with the Assets, except as provided in Article 4.1(e). Specifically, but not by way of limitation, R-P has no knowledge ^{of ~~any~~ *of B&B RMV*} ~~or~~ any pending or threatened action by any state or federal agency which would adversely affect Vertac's ability to sell the Products, except as disclosed in 4.1(e). No representation or warranty by R-P contained in this Agreement and no statement contained in any certificate, schedule, list or other writing furnished to Vertac pursuant hereto contains any untrue statement of a material fact or omits to state a material fact necessary in order to make the statements contained herein or therein not misleading.

(d) The Closing Inventories purchased and sold hereunder meet the specifications and are fit for the purposes set forth on the labels affixed thereto, said labels being among those attached as Exhibit "A" to this Agreement.

(e) R-P has complied with all testing and reporting requirements imposed by law with respect to the Registrations;

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provided, however, it is understood that EPA has notified all registrants of products containing 2,4-DB that additional test data will be required in accordance with the terms of a notice of data call in furnished by R-P to Vertac and dated July 22, 1982. To the best of R-P's knowledge and belief, the data that will be produced in accordance with such notice will not adversely affect the registered uses of the Products as shown in the Registrations attached hereto. R-P has the complete and unrestricted right and power to transfer the Registrations to Vertac.

(f) For a term beginning with the date of Closing and ending two (2) years following the date of Vertac's final payment to R-P pursuant to Article 2.2 hereof, neither R-P nor any company controlled by R-P will compete with Vertac in the sale or resale in the United States of any of the Products which Vertac is hereby purchasing, it being agreed that competition by R-P or such company controlled by R-P during the term hereof shall constitute breach of this covenant. In addition, during said period, R-P will personally introduce Vertac to R-P's major Product customers and prepare a letter of introduction to its 2,4-DB herbicide customers immediately following Closing. R-P further agrees not to disclose to any party after March 11, 1983 any information or data contained in the Assets purchased and sold hereunder, heretofore deemed confidential by R-P, except as otherwise permitted herein or as shall be or become, through no fault of R-P, in the public domain. R-P shall assign to Vertac its rights under any secrecy agreements entered into prior to March 11, 1983 in connection with its 2,4-DB herbicide business. *B. R. W.*

(g) R-P is not currently bringing to market any herbicides intended to supplant the Products described in the Registrations purchased by Vertac hereunder, with the exception of acifluorfen and related herbicides.

(h) From the effective date of this Agreement to the date of Closing, R-P shall conduct its 2,4-DB business in the ordinary course, except that R-P will not process shipments of 2,4-DB for two (2) days prior to Closing.

(i) The representations and warranties of R-P contained in this Agreement shall be true and correct on and as of the date of Closing as though made on that date.

(j) Following the Closing, R-P will execute such further documents and cooperate with Vertac in such manner as shall be or become reasonably necessary to effectuate the transfer and delivery of Assets provided for herein and otherwise to carry out the intent of this Agreement.

4.2 Vertac's Representations, Warranties and Covenants.

Vertac represents to R-P as follows:

(a) Vertac is a corporation duly organized, validly existing and in good standing under the laws of the State of Delaware and has all requisite corporate power and authority to enter into this Agreement and to carry out the transactions contemplated herein.

ARTICLE V. CLOSING

5.1 Time and Place. Closing of the transactions contemplated by this Agreement shall take place on a date and place

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to be agreed upon by the parties (the "Closing Date"), but in no event later than March 21, 1983.

5.2 Closing Documents. At the Closing, R-P shall deliver to Vertac or its designated assignee one or more fully executed bills of sale, assignments and/or other instruments of conveyance in form and substance reasonably satisfactory to counsel for Vertac, transferring good and merchantable title in the Assets to Vertac, including:

(a) Letter or letters to the Environmental Protection Agency and all appropriate state agencies directing the transfer of the Registrations to Vertac.

(b) Good and sufficient assignment of the Trademark and its associated goodwill and contract rights.

(c) Bill of Sale and Assignment evidencing Vertac's ownership of the remaining Assets, including:

- (1) The Registration Data
- (2) The Manufacturing and Formulation Data.
- (3) The Process Data.
- (4) The Market Studies.
- (5) The Customer Data.
- (6) The Closing Inventories.

(d) R-P shall deliver to Vertac at its offices in Memphis, Tennessee, within thirty (30) days following the Closing, all files, records, documents and similar items comprising all of the Assets sold and delivered hereunder, including those specifically described in the Bill of Sale and Assignment referred to above.

5.3 Payment. At the Closing, Vertac shall deliver to R-P its check payable to R-P in the sum of Two Hundred Twenty-Five Thousand Dollars (\$225,000.00), by certified check. *BRM*

ARTICLE VI. SURVIVAL OF REPRESENTATIONS, WARRANTIES
AND COVENANTS/INDEMNIFICATION

6.1 Except as otherwise specifically provided for herein, representations, warranties and covenants of the parties contained in this Agreement shall survive the Closing for a period of seven (7) years following the date of Closing.

6.2 Each party agrees to indemnify, defend and hold the other harmless from and against all demands, claims, actions or causes of action, assessments, losses, damages, liability, costs and expenses, including without limitation, interest, penalties and attorneys fees asserted against, resulting to, imposed upon or incurred by such other party by reason of or resulting from any breach of the representations, warranties, covenants and agreements of the other party contained in this Agreement.

6.3 In no event shall R-P be liable for, and Vertac assumes the entire responsibility for, all personal injury and property damage resulting from the handling, possession, transportation, use or sale of any of the Assets after delivery of same to Vertac hereunder, except as shall arise as a result of the negligence or breach of warranty of R-P, and Vertac agrees to indemnify and hold R-P harmless from any and all liability therefor, including losses, expenses, costs and damages, including reasonable attorneys fees in connection therewith.

6.4 R-P agrees to indemnify and hold Vertac harmless from any and all liability for losses, expenses, costs and damages, including reasonable attorneys fees, arising out of the manufacture, handling, possession, transportation, use or sale of

any of the Products described herein sold by R-P prior to January 1, 1983.

ARTICLE VII. GENERAL

7.1 This Agreement and the Exhibits attached hereto or to be attached hereto contain the entire agreement between the parties with respect to the transactions contemplated herein.

7.2 This Agreement shall be governed by the laws of the State of Tennessee.

7.3 This Agreement shall be binding upon and shall inure to the benefit of the parties hereto and their respective successors and assigns.

7.4 It is agreed that Vertac will purchase and R-P will convey the Assets described in Article I to Vertac, "as is" on the Closing date, except the Closing Inventories. Within thirty (30) days following Closing, Vertac shall inspect and inventory the Closing Inventories and notify R-P of any apparent defects in the condition of the containers or other physical defects which would be readily apparent upon visual inspection or mistakes in the quantities scheduled in Exhibit "E-1". In the absence of such notice by Vertac to R-P within thirty (30) days following Closing, the Closing Inventories shall be deemed accepted by Vertac "as is", subject, however, to R-P's warranty in Article 4.1(d) of this Agreement. *A. R. W.*

IN WITNESS WHEREOF, the parties have caused this Agreement to be executed by their duly authorized officers as of the Effective Date first appearing above.

RHONE-POULENC, INC.

By: *Robert Weidberg*
PRESIDENT

VERTAC CHEMICAL CORPORATION

By: *C. J. Bonarje*
President

EXHIBIT A
REGISTRATIONS

Included in this exhibit are:

1. Copy of all Rhone-Poulenc 2,4-DB labels.
2. Copy of sub-registered labels.
3. List of Rhone-Poulenc's current private label customers who are sub-registered.

March 16, 1983

Rhone-Poulenc Inc.'s Current Private Label Customers For 2,4-DB

Customer	1982 label
Chem-Nut Inc. Box 3706 Albany, GA 31706 Contact: Carroll Harpole Phone: 912-833-7050	Chem-Nut 2,4-DB re Butoxone
Gold Kist Inc. 110 Smith Ave. Thomasville, GA 31792 Contact: Evelyn Buckner, Purchasing Agent Phone: 912-228-1333	Gold Kist 2,4-DB 175 re Butoxone
Helena Chemical Co. 2603 Corporate Ave., East - Suite 125 Memphis, TN 28132 Contact: Charles Blue Phone: 901-761-0050	Helena 2,4-DB re Butoxone
Red Panther Chemical Co. PO Box 550 Clarksdale, MS 38614 Contact: John Duff Phone: 601-627-4731	Red Panther 2,4-DB Re Butoxone
Riverside Chemical Co. Subsidiary of Terra Chemicals International PO Box 1828 Solix City, Iowa 51102 Contact: Ray Miller Phone: 712-277-1340	Riverside 2,4-DB 2 (re Butoxone Amine) and Riverside 2,4-DB 1.75 (re Butoxone)
USS Agri-Chemicals Div. of U.S. Steel Corp. PO Box 1685 Atlanta, GA 30301 Phone: 404-572-4352 Contact: Charles MacWilliams	USS 2,4-DB re Butoxone
Voluntary Purchasing Groups, Inc. Box 460 Bonham, TX 75418 Contact: Michael Jackson Phone: 214-583-5501	Hi-Yield 2,4-DB 2Lb. re Butoxone Amine

DCA Purchases from R-P Detail:

Date	Vendor	Inv. #	DCA		Load	ODCB Used lbs	DCA Purch lbs	Amount	Units Pr
			kg	lbs					
A/Ps R-P:									
4/27/1999	P-P	60132483	44,000	97,002				85,800.00	0.885
5/4/1999	P-P	60132668	32,000	70,647				62,400.00	0.885
A/P's Misc:									
6/30/1999	Gilscot	55268						28,118.02	
ODCB Used									
5/31/1999	ODCB Used	JV03-5-38				174,168		64,442.16	0.370
Sub Total								238,758.18	1.425
Value Transferred to Inventory:									
5/31/1999	DCA Purchased	JV03-5-55					167,549	(212,642.16)	1.269
10/31/1999	DCA Purchased	JV03-10-55						(28,118.02)	
Balances			78,000	167,650		174,168	167,549	0.00	

DCA Purchases from Biesterfield Detail:

Date	Vendor	Inv. #	DCA		Load	ODCB Used lbs	DCA Purch lbs	Amount	Units Pr
			kg	lbs					
A/Ps R-P:									
7/3/1999	Biesterfield	2533AG221	12,000	26,455				36,600.00	1.383
A/P's Misc:									
8/24/1999	Gilscot	55412						5,709.02	
9/30/1999	Gilscot	55412						140.00	
Sub Total								42,449.02	1.605
Value Transferred to Inventory:									
8/31/1999	DCA Purchased	JV03-8-55					26,455	(26,984.10)	1.020
10/31/1999	DCA Purchased	JV03-10-55						(15,464.92)	
Balances			12,000	26,455		0	26,455	0.00	



WESTRADE INC.

10260 Westheimer, Suite 230 • HOUSTON, Texas 77042
Phone: (713) 785-0053 Telex: 795110 Fax: (713) 977-3727

COMMERCIAL INVOICE

No 000074

DATE 18-Mar-99

TERMS OF SALE 60 DAYS

S
O
L
D
T
O

CEDAR CHEMICAL CORPORATION
P O BOX 2749 - HWY 242 SOUTH
WEST HELENA AR 72390

M
A
R
K
S

P.O 04-023454

INVOICE No.	SHIPPED VIA	TOTAL PKGS: TOTAL WTS	YOUR ORDER No.	YOUR REQ. No.		
	INLAND FREIGHT	234 DRUMS				
ITEM No.	QTY ORDERED	QTY BACK ORDER	QTY SHIPPED	DESCRIPTION	UNIT PRICE	TOTAL
			128 669 LB	3,4 DCA FCA HUNGARY ORIGIN. BAYER LEVERKUSSEN GERMANY EX WORKS FREIGHT FCA HUNGARY ***UNIT PRICE	US\$ 185 715 50 US\$ 5 000 00 US\$ 190,725 50 \$1 478847	190,725 50

MAR 30 1999
WEST HELENA

VENDOR #		INVOICE #	
32516		74	
P.O. #	REC RPT #	INV. CD	INV. DATE
23454		1	031899
TERMS CODE	DUE DATE	FRT BILL CD	SALES ORDER #
5			
INVOICE AMT		DISC ALLOWED	
190,725 50			
GL NUMBER	AMOUNT	WORK ORDER #	
C153 5910	190,725 50		
		198	

ATION

PLAZAS CONSIGNADOS EN LA DESTINATARIA POR CUALQUIER REEMBOLSO DATOS

Rhône-Poulenc Agro

14-20 rue Pierre Baizet - B.P. 9163
 69263 Lyon Cedex 09 - France
 National: Tel: 04 72 85 25 25 - Fax: 04 72 85 27 99
 International: Tel: +33 4 72 85 25 25 - Fax: +33 4 72 85 27 99
 N° d'identification TVA: FR 53 969 502 17

ORIGINAL

INVOICE NO: 60132668 DATED 04.05.1999
 STAT : 065 01/91

CONSIGNEE: HUEMV
 NORTH HUNGARIAN CHEMICAL
 EMV
 3792 SAJOBABONY
 HUNGARY

INVOICEE: USCEDAR
 CEDAR CHEMICAL CORPORATION
 ATTN : BOB CHRISTIAN
 P.O. BOX BOX 2749
 72390 WEST HELENA/AR
 UNITED STATES

MAY 27 1999

O/REF : 01 40139831/0010
 Y/REF : 040-33778
 SHIPPING BY : BETZ FRANCE
 TERMS OF DELIVERY : DDU-DELIV UNCLEARED
 TERMS OF PAYMENT : 90 DAYS INVOICE DATE
 PAYMENT DATE : 02.08.1999
 PAYMENT MODE : TELEGRAPHIC TRANSFER
 CURRENCY : USD

IN KUHNE ET NAGEL

EOC : SAJOBABONY

PRODUCT CODE : 19931VVRC
 CUST.MATERIAL NO : 3,4 DCA
 QUANTITY : 32000,00 KG
 UNIT PRICE : 1,95 USD PER 1 KG
 AMOUNT : 62.400,00 USD

SH N° : 29214210

70,547 * DCA TRANS TO EMV

73,334 * ODCB USED

MARKING

RHONE POULENC AGRO
 3,4-DCPI
 CEDAR / USA
 N.W.....
 G.W.....
 NR.....

62.400,00 USD

1 des Impôts

VENDOR #		INVOICE #	
24804		60132668	
PO #	REC. RPT #	INV CD	INV. DATE
33778		1	050499
TERMS CODE	DUE DATE	FRT BILL CD	SALES ORDER #
D	8-2-99		
INVOICE AMT.		DISC ALLOWED	
62.400,00			
GL NUMBER	AMOUNT	WORK ORDER #	
S 4 1590	62.400,00	235	

RHÔNE POULENC
 SECTEUR AGRO
 Rue Pierre Baizet - B.P. 9163
 69263 LYON CEDEX 09
 72 85 25 25 - Fax 04 72 85 27 99
 3 369 503 309 - Capital 1 431 51

Rhône-Poulenc Agro

14-20, rue Pierre Baizet - B P 9163
 69263 Lyon Cedex 09 - France
 Tel 04 72 85 25 25 - Fax 04 72 85 27 99
 Telex 310 098 F Rhône
 N° Identification TVA FR 53 969 503 309

ORIGINAL

MAY 27 1999

WEST HELIX

INVOICE NO: 60132483 DATE: 27.04.99
 STAT : 055 01 91

CONSIGNEE: HUENY
 NORTH HUNGARIAN CHEMICAL
 EMV
 3792 SAJOHABONY
 HUNGARY

INVOICEE: USCETAF
 LEONAR CHEMICAL CORPORATION
 ATTN: BOB CHRISTIAN
 P.O. BOX 2749
 22390 WEST HELIX AR
 UNITED STATES

REF : 01 40109402 0010
 REF : 04033798
 SHIPPING : BETZ FRANCE

INC-8921-7A

TERMS OF DELIVERY : F.O.B. DELIV UNCLEARED
 TERMS OF PAYMENT : 30 IN ADVANCE DATE
 PAYMENT DATE : 26.07.1999
 PAYMENT MODE : TELEGRAPHIC TRANSFER
 CURRENCY : USD

DOC : SAT. 8-5000

PRODUCT CODE : 19931 ARU
 CUSTOMER REF ID : 314 DE
 QUANTITY : 44000 KG
 UNIT PRICE : 1.95 USD PER 1 KG
 AMOUNT : 85800.00 USD

SH N° : 1921401

97,002# DCA SALE TO E1
 100,834# OXB USED

PHONE: POULENC 0470
 314-1091

VENDOR #		INVOICE #	
24804		60132483	
P.O. #	REC. RPT. #	INV. CD	INV. DATE
33778		1	042799
TERMS CODE	DUPLICATE DATE	FRT. BILL CD	SALES ORDER #
D	7-26-99		
INVOICE AMT		DISC ALLOWED	
85,800.00			
GL NUMBER	AMOUNT	WORK ORDER #	
4 1590	85,800.00	235	

ST. ... USD

... Inc. ...

RHÔNE POULENC
 SECTEUR AGRO
 rue Pierre Baizet - B P 9163
 9263 LYON CEDEX 09
 85 25 25 - Fax 04 72 85 27 99
 1 969 503 309 - Capital 1 431 515 000 F

Rhône-Poulenc Agro

14-20, rue Pierre Buzet - B P 9163
 69263 Lyon Cedex 09 - France
 Tel 04 72 85 25 25 - Fax 04 72 85 27 99
 Telex 310 098 F Rhone
 N° identification TVA FR 53 969 503 309

MAY 27 1999

DEBIT NOTE

NO: 60125470 DATED: 30.07.1998

INVOICE : USCEDAR
 CEDAR CHEMICAL CORPORATION
 ATTN : BOB CHRISTIAN
 P.O. BOX BOX 2749
 72390 WEST HELENA/AR
 UNITED STATES

USCEDAR
 CEDAR CHEMICAL CORPORATION
 ATTN : BOB CHRISTIAN
 P.O. BOX BOX 2749
 72390 WEST HELENA/AR
 UNITED STATES

V/REF : A SUIVRE
 TERMS OF PAYMENT : 30 DAYS INVOICE DATE
 PAYMENT DATE : 28.10.1998
 PAYMENT MODE : TELEGRAPHIC TRANSFER
 CURRENCY : USD

0010 19931VVRC 34 DCA QUVRAISON CEDAR VRAC
 O/REF : 01/60122288/0010/0000
 PRODUCT.....: 34 DCA QUVRAISON CEDAR VRAC
 NET VALUE 1 : 2.176.24 USD

O/ORD: 01/40132320/0010/0000

2.176.24 USD

ITEM TOTAL

2.176.24 USD

TOTAL TO BE PAID

VENDOR #		INVOICE #	
1 24804		60125470	
PO #	REC. RPT. #	INV. CD	INV. DATE
		1	073098
TERMS CODE	DUE DATE	FRT BILL CD	SALES ORDER #
D	10-28-98		
INVOICE AMT	DISC ALLOWED		
2176.24			
GL NUMBER	AMOUNT	WORK ORDER #	
01535910	2176.24	235	
DONE BY	DATE	APPROVED BY	ENTERED BY
RE	5-26-99	[Signature]	

EX : 850 FRF
 WEEK : 10.200 FRF
 LE HAVRE : 12.500 FRF

TOLL CONVERSION RATE :

Rhône-Poulenc Agro

14-20, rue Pierre Balzet - B.P. 9163
 69263 Lyon Cedex 09 - France
 Tél. 04 72 85 25 25 - Fax 04 72 85 27 99
 Télex 310 098 F Rhône
 N° identification TVA : FR 53 969 503 309

ENTERED

MAY 27 1999

WEST HELENA

DEBIT NOTE
 NO: 60124126 DATED 11.08.1998

USCEDAR
 CEDAR CHEMICAL CORPORATION
 ATTN: BOB CHRISTIAN
 P.O. BOX 2749
 72390 WEST HELENA/AR
 UNITED STATES

INVOICE : USCEDAR
 CEDAR CHEMICAL CORPORATION
 ATTN : BOB CHRISTIAN
 P.O. BOX 2749
 72390 WEST HELENA/AR
 UNITED STATES

Y/REF : A SUISSE
 TERMS OF PAYMENT : 90 DAYS INVOICE DATE
 PAYMENT DATE : 09.09.1998
 PAYMENT MODE : TELEGRAPHIC TRANSFER
 CURRENCY : USD

0010" 19931VVRC 34 DCA LIVRAISON CEDAR VRAO
 O/REF : 01760122288/0010/0000
 PRODUCT.....: 34 DCA LIVRAISON CEDAR VRAO
 NET VALUE 1 : 128.845,90 USD
 O/ORD: 01/40132320/0010/0000

ITEM TOTAL

128.845,90 USD

128.845,90 USD

TOTAL TO BE PAID

FOR THE DCA TRANSPORT AND CONTAINERS RENTAL

VENDOR #		INVOICE #		
24804		60124126		
P.O. #	REC RPT. #	INV CD	INV DATE	
		1	06/11/98	
TERMS CODE	DUE DATE	FRY BILL CD	SALES ORDER #	
D	9-9-98			
INVOICE AMT		DISC ALLOWED		
128,845,90				
GL NUMBER	AMOUNT		WORK ORDER #	
01535610	128,845,90		235	

MAI : 205,87...
 ...
 ...

JUN-07-89 10:30AM PROBLEMAR CHEMICAL

Rhône-Poulenc Agro

14-20, rue Pierre Boizes - B.P. 9163
69263 Lyon Cedex 08 - France
Tel 04 72 85 25 25 - Fax 04 72 85 27 89
Télex 370 098 F Rhône
N° Identification TVA : FR 53 969 503 309

ENTFERN

MAY 27 1999

WEST HELENA

DEBIT NOTE

USIENAR
CEDAR CHEMICAL CORPORATION
ATTN : BOB CHRISTIAN
8115 BIRCH BLVD
70090 WEST HELENA/AR
UNITED STATES

INVOICE # 6012289
CEDAR CHEMICAL CORPORATION
ATTN : BOB CHRISTIAN
P.O. BOX 2749
70090 WEST HELENA/AR
UNITED STATES

V/REF : A SUIVRE
TERMS OF PAYMENT : 30 DAYS INVOICE DATE
PAYMENT DATE : 09.09.1998
PAYMENT MODE : TELEGRAPHIC TRANSFER
CURRENCY : USD

0010 : 19931VVND 34 DCA DIVAISON CEDAR VRAO
O/REF : 01/6012289/0010/0000
PRODUCT : 34 DCA DIVAISON CEDAR VRAO
NET VALUE 1 : 45.475,40 USD
O/ORD: 01/48132320/0010/0000

45.475,40 USD

ITEM TOTAL

45.475,40 USD

TOTAL TO BE PAID

VENDOR #		INVOICE #	
24804		6012289	
PO #	REC RPT #	INV CD	INV. DATE
		1	06/198
TERMS CODE	DUE DATE	PRY BILL CD	SALES ORDER #
D	9.9.98		
INVOICE AMT		DISC ALLOWED	
45.475.40			
GL NUMBER	AMOUNT	WORK ORDER #	
01535910	45.475.40	235	



Blasterfeld

Blasterfeld U.S., Inc.
500 Fifth Avenue
New York, NY 10110

INVOICE

CEDAR CHEMICAL CORP.
5100 POPLAR
MEMPHIS TN 38137

AUG 30 1999

WASH DC

Inv./Ref. No. 2533/AG-2213

Date: JULY 3, 1999

Ship From: JARWARHAL NEHRU
PORT

Basis: CIF NEW ORLEANS, LA

Freight: PREPAID

Payment Terms: NET 30 DAYS B/L
DATE

A LATE PAYMENT CHARGE OF 1% COMPOUNDED MONTHLY WILL BE APPLIED TO ANY AMOUNTS OUTSTANDING AFTER DUE DATE.

PRODUCT	QUANTITY	PRICE	AMOUNT
3,4 DICHLOROANILINE PURITY 98.5 %	12,000 KGS	US\$3.05/KG (CIF)	US\$36,600.00

ORIGIN: INDIA

PACKING:

240 X 50 KG NET DRUMS
TOTAL NET WT = 12,000 KGS
TOTAL GROSS WT = 13,560 KGS

FOB VALUE	US\$34,430.91
FREIGHT	2,000.00
INSURANCE	169.09

\$36,600.00

VENDOR #		INVOICE #	
3228		2533AG221	
P.O. #	REC RPT #	INV. CD	INV DATE
64429		1	070399
TERMS CODE	DUE DATE	FRY. BILL CD	SALES ORDER #
2			
INVOICE AMT		DISC ALLOWED	
36,600.00			
GL NUMBER		AMOUNT	WORK ORDER #
24	1590	36,600.00	

RECT
?
INC.

CEDAR WEST HELENA														CC	C McGEE	R Farquhar	Mo Book
PROPANIL PRODUCTION AND USAGE															G Satterfield	P Fields	File Copy
AS OF															B Christian	J Rone	
Oct-88																	
FINISH GOODS MFG																	
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Y-T-D	# of Gal	Std		
DCA	1,068,106	1,057,745	1,010,116	1,388,929	1,163,176	1,058,511	1,071,128	1,209,153	907,253	649,737			10,521,854				
ODCB	1,138,109	1,120,877	1,291,878	1,649,398	1,365,079	1,093,601	1,268,813	1,256,360	1,001,527	719,586			11,903,128	1 1313	1 1300		
Nitric Acid	492,059	474,881	542,539	728,842	618,875	518,841	583,122	547,364	414,827	323,785			5,223,815	0 4865	0 4970		
Sulfuric Acid	971,379	911,899	1,060,090	1,378,989	1,210,131	897,605	1,078,457	1,041,074	777,491	574,825			9,890,850	0 8400	0 8550		
Pist/Carb Cata	282	265	287	381	355	401	547	557	411	327			3,793	0 0004	0 0003		
Hydrogen	51,718	48,926	58,409	72,841	63,266	53,604	65,278	58,021	44,789	41,788			556,740	0 0529	0 0510		
Soda Ash	12,016	2,608	10,976	9,454	4,030	1,652	1,286	4,684	888	2,768			50,372	0 0048	0 0110		
Lime	37,600	23,400	27,400	33,600	32,100	23,100	40,100	28,700	24,000	24,300			264,300	0 0280	0 0305		
Caustic 50%	73,386	47,210	29,724	48,095	68,323	83,829	52,578	25,589	29,080	68,418			518,012	0 0490	0 0182		
Hydr Peroxide	8,000	1,000	4,000	7,500	8,500	3,000	3,000	5,500	1,500	7,000			49,000	0 0047	0 0050		
Methanol	1142												1,142	0 0001			
TEPA	681	883	533	346	859	620	286	502	604	822			6,208	0 0008	0 0008		
Ferrous Sulfate	138	60	125	213	225	75	125	125	87	175			1,338	0 0001	0 0001		
Propanil Tech	1,088,110	1,498,470	1,389,885	1,500,572	1,351,740	703,680		883,105	1,360,023	1,278,030			11,028,415				
DCA	834,620	1,127,520	1,011,583	1,151,322	991,940	505,440		680,400	1,021,595	969,414			8,294,014	0 7520	0 7550		
P Acid	455,484	613,326	568,309	644,465	580,356	290,683	152	408,296	572,870	561,415			4,673,356	0 4237	0 3707		
P Anhy	2,110	992		1,081	3,885			1,738	6,369	37,783			64,068	0 0049	0 0150		
Plaked Tech	105,000	46,500	22,500	369,000	729,000	268,500			888,203	835,500			3,344,203				
P Tech	105,000	46,500	22,500	369,000	729,000	268,500			888,203	835,500			3,344,203	1 0000	1 0000		
3# Bulk	20,845			26,880	8,877	85,980	13,753	84,327	68,693				311,056				
P Tech	63,230			85,853	31,800	278,000	47,530	271,850	220,720				997,883	3 2084	3 2160		
Isoph	40,200			59,219	20,000	174,360	20,950	170,640	141,891				627,260	2 0168	2 2500		
MO						2,970			2,500				5,470	0 0178	0 0143		
Emul																	
Aromatic B	39,628			48,377	22,011	154,240	26,550	151,240	123,140				565,186	1 8170	1 8120		
Armul	26,080			35,678	13,040	110,360	19,500	111,340	77,383				393,392	1 2647	1 2683		
Sun Oil	8,680			11,690	4,345	37,794	6,600	37,120	30,170				138,499	0 4388	0 4300		
Tenn 500																	
4# Bulk	20,300	88,488	134,533	32,876	105,720	35,678			61,971	94,341			584,707				
P Tech	84,040	414,605	539,255	135,605	442,710	134,870			222,400	392,010			2,365,485	4 0456	4 1500		
Isoph	15,020	76,887	101,537	24,308	80,260	25,150			45,485	71,350			439,995	0 7525	0 7200		
MO	60,100	288,590	390,039	97,087	331,319	98,238			160,190	283,825			1,719,386	2 9406	2 7400		
Emul	19,680	97,604	128,365	30,225	103,535	31,876			56,828	104,320			572,033	0 9783	0 8250		
Aromatic B																	
Armul																	
Isoph/Mibk																	
4# X Bulk	40,877				4,885			125,189					171,041				
P Tech	168,940				20,750			514,000					703,690	4 1142	4 1270		
MO	67,600				8,280			211,725					287,615	1 6816	1 7620		
Isoph	67,800				8,280			205,170					281,060	1 6432	1 6880		
Emul	33,819				3,880			98,835					138,534	0 7883	0 7820		
Sun Oil	16,400				2,000			48,570					67,970	0 3974	0 3041		
Aromatic B															0 0503		
Armul	7,200				880			21,820					30,000	0 1754	0 3844		
5# Bulk																	
P Tech	75,831	178,838	97,188	103,824	30,285	14,130							500,986				
Isoph/Mibk	319,195	753,350	405,130	428,894	127,485								2,034,054	4 0801	4 1270		
Emul	290,720	683,130	393,141	408,213	145,271								1,920,475	3 6334	3 8280		
Isoph	67,780	160,945	88,740	93,843	27,825								498,333	0 8709	0 8030		
MO		250											250	0 0006			
Duration-Days		14	31	30									75				
Standard Grade		131,400	259,200	183,661									574,261				
B Grade																	
DCPI		118,900	214,600	143,800									477,300	0 8812	0 8340		
DMA		28,520	53,990	35,815									118,725	0 2067	0 2100		
Heptane		4,988	12,231	6,104									23,301	0 0408	0 0716		
Sulfuric Acid																	
50% Rayon Caustic																	

FINISHED GOODS MFG CONT'D		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Y-T-D	#W or Gal	Std
TA-Days																
Prod																
Nitromethane																0 7600
Formaldehyde																2 6000
Methanol																0 2480
Sulfuric Acid																0 0660
Rensy Nickel																0 0110
Hydrogen																0 1420
50% Caustic																0 1000
Wham																
Prod	100,800	8,370	50,100	102,709	116,140	115,730	10,440							504,289		
Flake Tech	180,000	204,000	218,000	522,000	228,906	398,000	13,224							1,758,130	3 4864	4 1240
Morwet	7,750	9,400	9,000	21,690	9,100	18,500	300				4,885			78,725	0 1561	0 0970
Polyfon O	210	288	252	608	283	452	14				(328)			1,720	0.0034	0 0100
Glycerine	10,500	11,900	12,600	30,450	13,251	23,100	817				(3,456)			99,162	0 1868	0 2430
Altonic											13,571			13,571	0 0269	0 3890
Kelzen	390	442	488	1,131	471	858	14				114			3,888	0 0077	0 0060
Veegum	8,340	9,490	10,080	24,050	9,752	13,020	600				4,802			80,134	0 1589	0 1170
Antifoam DC 1500	320	362	372	899	346	486	17				1,157			3,959	0 0079	0 0010
Technical Carbaryl	300	340		870	375	660	20				(1,350)			1,205	0 0024	0 0070
Ethaphon	200	227	240	580	230	440					97			2,014	0 0040	0 0040
Soprophor 40384	18,680	22,304	23,616	57,072	24,594	43,286	1,260				7,898			198,718	0 3960	0 1460
Proxal	1,203	2,655	1,478		47	605					678			6,665	0 0132	
Formaldehyde	58	284	368			117								825	0 0016	
Glutaraldehyde						5,082	162				24,021			29,265	0 0580	
Duet																
Prod			138,600	82,520	2,480									203,580		
Flake Tech			457,500	329,400										786,900	1 6604	4 1240
Veegum			21,000	15,120							1,981			38,081	0 0765	0 1170
Glycerine			27,000	18,440							(1,411)			45,029	0 0893	0 2430
Soprophor 40384			49,500	85,640							3,225			88,365	0 1762	0 1460
Morwet			18,750	13,500							2,036			34,286	0 0680	0 0970
Polyfon O			525	378							(134)			789	0 0018	0 0100
Ethaphon			500	360							40			900	0 0018	0 0400
Proxal			3,075	3,913							278			7,268	0 0144	
Formaldehyde			735	675										1,410	0 0028	
Antifoam			775	558							472			1,805	0 0038	0 0010
Benzothuron			3,625	2,638										6,063	0 0120	
Kelzen			875	702							46			1,723	0 0034	0 0060
Butox 175																
Prod				18,691	14,880	17,417	10,523	4,638						66,947		
2-4 D-B Acid				35,715	26,780	32,100	18,420	8,955						121,970	1 8495	1 8000
DMA				16,645	12,755	14,820	9,087	4,468						57,775	0 8761	0 8000
Citric Acid				4,965	3,660	4,365	2,625	1,217						18,832	0 2552	0 2600
Butox 200																
Prod	10,840	1,660					1,380	5,645	15,825					35,250		
2-4 D-B Acid	23,060	3,880					3,570	8,570	32,963					69,033	1 9584	2 0800
DMA	12,540	2,010					1,705	7,825	17,977					41,857	1 1874	1 1000
Citric Acid	4,685	780					485	2,575	6,406					14,890	0 4224	0 4200
Butox 7600																
Prod									47,325	6,425				53,750		
2-4 D-B Acid									38,611	3,277				41,888	0 7793	0 7650
Continental Clay									7,720	(281)				7,439	0 1368	0 1840
Hi Sol 233									275	2,038				2,313	0 0430	0 0060
Steporse DF 200									2,903	(404)				2,499	0 0465	0 0600
Steporse DF 95									275	(23)				252	0 0047	0 0060
FINISH GOODS PKG (Number Containers)														Y-T-D	Total	Grand
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Containers	Gals/Lbs	Total	
Prop 360 35 g																
Prop 360 200L																
Prop 360 210L																
Superox 360 200L																
3# 20L				4,673	69		192		1,683					6,907	35,941	
3# 50L								(2)						(2)	(28)	
3# 200L					213	1,641	82	1,248	1,730					4,811	284,213	
3# 65L	378													378	20,845	310,973
4# 20L					440									440	2,328	
4# 85		3,528	3,778		1,987	1,098			1,025	2,841				14,223	498,155	
4# 200L	529				8				2,289					2,820	149,008	
4# 210L																
4# 65	225	(14)							88					307	16,685	
Superox 480 200L																

FINISH GOODS PRG CONT'D (Number Containers)	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Y-T-D Containers	Total Gals/Lbs	Grand Total	
Propanex 4# 35																
Propanex 500 55 g																666,372
Stam 35	1,337	3,637	3,585	2,818									11,357	397,495	397,495	
Tham 25 g																
Pure Tromethamine 2																
Trometamol 25 Kg																
Trometamol 50 Kg																
Tra Ultra Pure 100Kg																
Pure Trsh Hq 100 Kg																
Wham Bulk				17,359	8,200								25,559	25,559		
Wham 2x2.5							6						5	25		
Wham 5																
Wham 100 L																
Wham 30																
Super Wham 2x2.5							5						5	25		
Super Wham 30	3,360	279	1,670	2,845	3,598	3,656	348						15,956	478,680	504,289	
Dust 30			4,620	2,084									6,704	201,120	201,120	
BandR 200L																
175 4x1				2,029	3,670		763	2,412	1,159				10,033	40,132		
175 2x2.5				2,115			2,875	175					5,165	25,825		
175 55																65,957
200 4x1																
200 2x2.5	2,168	332						276	1,109	3,165			7,050	35,250		
200 55																35,250
7500 10x2.33										1,296			1,296	30,197	30,197	
Flaked Tech 25 Kg OS Ptl	1,122	1,240	1,120	1,360	640			40					5,522	304,262		
Flaked Tech 25 Kg IS Ptl					200	1,630	2,105			1,180	1,215		6,830	385,313	689,575	
Duron Col 248 Kg																
Duron Col 224 Kg																
Butoxone 7500 10x2.33										1,296	906		2,202	22,020	22,020	
CUSTOM MFG																
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Containers	Gal/Lbs	Total	
Acfluorfen-Days	15	28	21	30	31	30	31	31	30	31			278			
Prod 100% Al lbs	96,014	143,900	151,181	151,628	169,964	255,683	238,245	60,518	147,835	83,049			1,507,737			
Mixed Acid	69,967												69,967	0.0464		
Parklone D				44,940			48,560						93,500	0.0620		
Sulfuric Acid		22,885	18,170	22,310	29,440	28,930	32,470	7,220	23,390	12,823			197,638	0.1311	0.2400	
Nitric Acid		43,808	37,058	47,074	57,944	61,777	65,910	13,665	43,164	23,786			394,172	0.2614	0.2600	
Acetic Anhydride	52,070	123,955	108,704	120,642	159,510	184,249	171,663	35,620	112,220	69,759			1,118,382	0.7404	0.7200	
PCE		84,940											84,940	0.0630	0.1200	
50% Caustic	182,636	168,332	168,872	187,978	233,024	282,288	348,808	78,438	202,188	128,514			1,862,376	1.3015	1.2000	
Soda Ash													100	0.0001		
R118118	245,500	480,000	432,000	620,000	643,550	683,000	678,500	132,000	478,500	284,000			4,535,050	3.0079	3.5400	
BFG-Days					16		31	22					68			
Production						681,550	2,765,780	1,462,010					4,909,320			
CYBP-Days	4						31	31					66			
Prod 100% AJ	4,230						7,183	18,784					30,197			
DICNIL	7,330						22,710	21,522					51,562	0.0342		
IPA	10,870						17,450	18,896					47,116	0.0312		
50% Caustic	5,123						10,548	23,014					38,685	0.0257		
Catalyzt	28						73	74					175	0.0001		
Hydrogen	174						678	638					1,890	0.0011		
Hcl	10												10	0.0000		
Dover Phos-Days		6	29	30	31	30							128			
Production			9,480	28,720	65,450	5,400							109,030			
Phenol		5,400	38,625	40,435	70,230	9,885							162,575	0.1078		
Caustic		20	140	180	340	50							710	0.0005		
TTP		7,800	75,532	64,421	112,910	18,085							278,748	0.1836		
PE		1,595	13,848	14,070	24,840	3,520							57,773	0.0383		
DCP		10,575	78,578	83,383	140,735	21,855							336,126	0.2228		
Xylene		50,950	99,980		7,365								155,295	0.1030		
Methanol		51,720					78,754						130,474	0.0665		
Phenol2																

CUSTOM MFG	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Containers	Gal/Lbs	Total
Ethephon-Days															
Prod 100% AI															
Ethylene Oxide															1 198
Phosphorus Trichloride															1 242
Anhydrous Hydr Chloride															0 850
Sulfuric Acid															
50% Caustic															1 189
FMC 6-NBto-Days	31	28	31	30	10								130		
Prod 100% AI	21,781	18,705	28,822	34,017	2,916								108,241		
Step 3	127,663	69,421	166,148	168,104									551,536	5 1914	5 920
Step 4															1 033
Step 5															1 000
Calcium Chloride															
Chlorine	13,717	8,280	11,910	12,091									45,978	0 4328	0 170
Aluminum Sulfate	34,347	25,049	36,178	50,470	1,870								147,814	1 3822	1,530
G Acid	14,559	5,852	5,842	15,314									41,367	0 3894	0,900
50% Caustic	7,668	9,280	27,272	25,000	9,285								78,615	0 7390	1 920
20% Oleum	108,439	81,939	40,309	148,504	12,978								332,228	3 6919	5 160
Methanol	21,458	23,340	12,741	32,502	8,348								96,387	0 8261	4 880
Soda Ash	4,900	3,700	3,850	6,000	1,000								19,250	0 1812	0 190
Toluene	110,448	114,324	80,165	138,049	12,167								465,143	4 3782	4 570
83% Sulfuric Acid				61,200									61,200	0 5760	0 010
Mixed Acid	7,581	5,774	8,455	11,820	1,281								32,891	0 3098	0 410
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Containers	Gal/Lbs	
Stanol-Days									14	31			45		
Prod Kg									3,647	11,724			15,271		
Stanol									24,217	52,243			78,460	0 7187	
N-Propanol									63,691	143,150			206,841	1 9469	
Catalyst									154	874			1,028	0 0097	
Hydrogen										274			274	0.0026	

RHÔNE-POULENC INC.

P.O. Box 125 - Black Horse Lane - Monmouth Junction New Jersey 08852 - Telephone (201) 297-0100 - Telex 844527

August 1, 1986

Mr. Ron Cheves
Vice President
Cedar Chemical Corporation
5100 Poplar
24th Floor
Memphis, Tennessee 38137

Dear Mr. Cheves:

Rhone-Poulenc Inc. proposes to enter into a contract with Cedar Chemical Corporation (hereinafter "Cedar") concerning certain steps in the production of Tackle[®], intermediates, which include production of two intermediates: 1) by a coupling reaction and 2) the other by nitration and neutralization steps. This Letter Agreement sets forth the following key terms and conditions agreed upon by the parties:

Coupling Reaction - RP-15

Cedar will modify an existing production facility for a maximum charge of \$75,000 to produce a minimum of 684,000 pounds of RP-15 at a nominal rate of 10,000 pounds per day (100% basis). The maximum charge of \$75,000 will be invoiced monthly and payment shall be made within 10 days of the date of the invoice. The amount of such invoices shall be equal to the expenditures actually incurred by Cedar for modification and installation charges related to Cedar's existing equipment. In order to verify Cedar's expenditures, Cedar shall make said invoices available to Rhone-Poulenc Inc. upon request.

The production rate will be guaranteed by Cedar, following a 7 day process confirmation start-up period, to be attended by Rhone-Poulenc personnel.

Production of 684,000 pounds is projected to be complete in 76 days. Additional production beyond 684,000 pounds, if desired, will be continued for 14 days and will be charged at the rate of \$.35 per pound of RP-15 (100% basis).

Production will commence on October 1, 1986, following a 6 week period required for plant preparation.



ADEQ0021197

Total processing charges for 90 days of production will be \$435,000, to be paid in three equal payments during the 90 day campaign. Additional production during the 90 day period will be charged at the rate of \$.35 per pound. Production time requested, beyond the 90 day period, will be charged for at the rate of \$175,000 per month - pro rata per day.

Nitration - Neutralization - RP-10

Cedar will modify an existing production facility for a maximum charge of \$425,000 to produce a minimum of 600,000 pounds of RP-10 at a nominal rate of 9,000 pounds per day (100% active basis). The maximum charge of \$425,000 will be invoiced monthly, and payment shall be made within 10 days of the date of the invoice. The amount of such invoices shall be equal to the expenditures actually incurred by Cedar for the purchase of equipment. Such equipment shall belong to Cedar except for a glass-lined reactor which shall belong to Rhone-Poulenc Inc. In order to verify Cedar's expenditures, Cedar shall make said invoices available to Rhone-Poulenc Inc. upon request.

The production rate will be guaranteed by Cedar following a 7 day process confirmation start-up period, to be attended by Rhone-Poulenc personnel.

Production of 600,000 pounds is projected to be complete in 73 days. Additional production beyond 600,000 pounds, if desired, will be continued for 17 days and will be charged at the rate of \$.35 per pound.

Production will commence as early as January 15, 1987 but no later than February 15, 1987, following a 10-12 week period required for plant preparation. Rhone-Poulenc Inc. shall provide Cedar with 30 days advance written notice of the actual commencement of production.

Total processing charges for 90 days of production will be a minimum of \$550,000, to be paid in three equal payments during the campaign. Additional production, during the 90 day period, will be charged for at the rate of \$.35 per pound of RP-10 (100% basis). Production time requested beyond the 90 day period will be charged for at the rate of \$200,000 per month - pro rata per day.

General Provisions

Cedar will secure necessary permits required to begin and continue production. Rhone-Poulenc Inc shall provide any necessary information or assistance in the procurement of said permits; and the status of said permits will be reviewed every 30 days by Cedar's and Rhone-Poulenc Inc.'s appropriate personnel. Cedar shall also advise Rhone-Poulenc Inc. in writing as to the need of any permit. If a 30 or more day delay occurs in processing any permit or if Cedar fails to procure a necessary permit, Rhone-Poulenc Inc. shall have the right to terminate this Agreement upon written notice to Cedar. However, Rhone-Poulenc Inc shall forfeit any monies paid prior to the date of termination.

Wastes will be processed by Cedar, if necessary, and sent off site for disposal with Rhone-Poulenc being charged the actual commercial rate. The costs of such waste processing is included in the over-all processing charge. Cedar shall provide Rhone-Poulenc Inc. with a detailed statement concerning its methods of waste disposal and shall verify that such methods comply with existing Federal and State environmental laws. Prior to the disposition of any wastes, the parties shall mutually agree upon the waste disposal site. In the event Cedar can process wastes through the biological system at West Helena, Cedar will share the savings with Rhone-Poulenc Inc.

Production facilities prepared for this project will be maintained by Cedar and will be made available to Rhone-Poulenc for additional production campaigns during a three year period. Prices will be approximately the same as provided in the first campaign with appropriate escalatorsto be provided in a subsequent Contract between the parties. Cedar will require advance notice of intent by June 1, 1987 to produce and volumes required. At the time of notification, Rhone-Poulenc Inc. shall advise Cedar whether to proceed only with the coupling step or also with the nitration and neutralization steps.

Cedar will be responsible for raw material consumption following the start-up process confirmation period. However, Cedar shall pay for the loss of any raw materials as a result of its negligence or the failure of equipment. In the event material is not in accordance with specifications, Cedar shall make a good faith effort to reprocess the material in order to comply with specifications.

Rhone-Poulenc will provide containers for shipment of product FOB West Helena, Arkansas.

Rhone-Poulenc will provide all raw materials and bear the cost of all waste disposal.

Notwithstanding this Letter Agreement, it is also understood that all of the terms and conditions contained herein will be incorporated into a formal Contract which will be executed no later than August 29, 1986. The Contract will also make provision for additional terms and conditions covering such items as: indemnities, warranties, insurance etc.

Please indicate your agreement with these terms and conditions by signing and dating the original and two copies of this Letter Agreement returning the original and a copy to me.

Very truly yours,

RHONE-POULENC INC.

BY: Jean-Pierre Dal Pont
~~Jean-Pierre Dal Pont~~
Vice President of
Technical Services

ACCEPTED AND AGREED TO:

CEDAR CHEMICAL CORPORATION

BY: Ron Cheves
Ron Cheves
Vice President

DATE: 8.1.86

Tackle[®] is a registered trademark of Rhone-Poulenc Inc.

REGIA 1001

844482

ALESF

8/5/86



REGIA 1001

CEAT PIERRE L/L FOOT

TO CONFIRM THAT OUR COUPLING STARTUP DATE IS OCTOBER 1, 1986.
HOWEVER CEAT MAY BE READY TO BEGIN AS EARLY AS SEPTEMBER
IF ALL RAW MATERIALS SHOULD BE SCHEDULED ACCORDINGLY.

TECHNICAL CONTACT AT WEST VALLEY PLANT IS TOM LONIC.
ALTERNATE IS JOHN WILLS. PURCHASING CONTACT IS CHARLES
FRISBY. ALTERNATE JOHN WILLS.

REGIA 1001

GEOFF DEWITT

CEAT CHEMICAL COFF./53927

REGIA 1001

RHÔNE-POULENC INC.

P O Box 125 - Black Horse Lane - Monmouth Junction, New Jersey 08852 - Telephone (201) 297-0100 - Telex 844527

August 1, 1986

Mr. Ron Cheves
Vice President
Cedar Chemical Corporation
5100 Poplar
24th Floor
Memphis, Tennessee 38137

Dear Mr. Cheves:

Rhone-Poulenc Inc. proposes to enter into a contract with Cedar Chemical Corporation (hereinafter "Cedar") concerning certain steps in the production of Tackle[®], intermediates, which include production of two intermediates: 1) by a coupling reaction and 2) the other by nitration and neutralization steps. This Letter Agreement sets forth the following key terms and conditions agreed upon by the parties:

Coupling Reaction - RP-15

Cedar will modify an existing production facility for a maximum charge of \$75,000 to produce a minimum of 684,000 pounds of RP-15 at a nominal rate of 10,000 pounds per day (100% basis). The maximum charge of \$75,000 will be invoiced monthly and payment shall be made within 10 days of the date of the invoice. The amount of such invoices shall be equal to the expenditures actually incurred by Cedar for modification and installation charges related to Cedar's existing equipment. In order to verify Cedar's expenditures, Cedar shall make said invoices available to Rhone-Poulenc Inc. upon request.

The production rate will be guaranteed by Cedar, following a 7 day process confirmation start-up period, to be attended by Rhone-Poulenc personnel.

Production of 684,000 pounds is projected to be complete in 76 days. Additional production beyond 684,000 pounds, if desired, will be continued for 14 days and will be charged at the rate of \$.35 per pound of RP-15 (100% basis).

Production will commence on October 1, 1986, following a 6 week period required for plant preparation.



ADEQ0017705

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Production facilities prepared for this project will be maintained by Cedar and will be made available to Rhone-Poulenc for additional production campaigns during a three year period. Prices will be approximately the same as provided in the first campaign with appropriate escalators to be provided in a subsequent Contract between the parties. Cedar will require advance notice of intent by June 1, 1987 to produce and volumes required. At the time of notification, Rhone-Poulenc Inc. shall advise Cedar whether to proceed only with the coupling step or also with the nitration and neutralization steps.

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Notwithstanding this Letter Agreement, it is also understood that all of the terms and conditions contained herein will be incorporated into a formal Contract which will be executed no later than August 29, 1986. The Contract will also make provision for additional terms and conditions covering such items as: indemnities, warranties, insurance etc.

Please indicate your agreement with these terms and conditions by signing and dating the original and two copies of this Letter Agreement returning the original and a copy to me.

Very truly yours,

RHONE-POULENC INC.

BY: Jean Pierre Dal Pont
Jean-Pierre Dal Pont
Vice President of
Technical Services

ACCEPTED AND AGREED TO:

CEDAR CHEMICAL CORPORATION

BY: Ron Cheves
Ron Cheves
Vice President

DATE: 8.1.86

Tackle[®] is a registered trademark of Rhone-Poulenc Inc.

RHÔNE-POULENC INC.

P O Box 125 - Black Horse Lane - Monmouth Junction New Jersey 08852 - Telephone (201) 297-0100 - Telex 844527

September 5, 1986

Mr. Ron Cheves
Vice President
Cedar Chemical Corporation
5100 Poplar Avenue
24th Floor
Memphis, Tennessee 38137

Dear Mr. Cheves:

The terms and conditions of this Letter Agreement in conjunction with the terms and conditions of the August 1, 1986 Letter Agreement, incorporated herein by reference and attached hereto as Exhibit "A", shall constitute the Agreement between Cedar Chemical Corporation, a Delaware corporation, with offices at Suite 2414, Clark Tower, 5100 Poplar Avenue, Memphis, Tennessee 38137, (hereinafter "Cedar") and Rhone-Poulenc Inc., a New York corporation, with offices at Black Horse Lane, Monmouth Junction, New Jersey (hereinafter "Rhone-Poulenc") concerning certain steps in the production of Tackle[®] intermediates which include production of two intermediates--1) by a coupling reaction and 2) the other by nitration and neutralization steps.

Definitions

For purposes of this Agreement, the following terms shall have the following meanings assigned thereto:

"RP-15" shall mean product meeting those specifications attached hereto as Exhibit "B"

"RP-10" shall mean product meeting those specifications attached hereto as Exhibit "C".

Term

This Agreement shall commence as of August 1, 1986 and shall terminate on June 1, 1989, unless terminated earlier in accordance with the provisions hereof, or unless extended by mutual agreement of the parties hereto.

Plant Modifications and Equipment

Cedar has heretofore undertaken to modify the plant in accordance with plans and specifications which have been approved by Rhone-Poulenc, so as to enable Cedar to initiate production of RP-15 on September 15, 1986.



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Beginning August 31, 1986 and on the last day of each month thereafter until completion of such modifications, Cedar shall invoice Rhone-Poulenc for all expenses incurred in so modifying the Plant, provided that the total of such invoices shall not exceed \$75,000. Title to all equipment and facilities acquired in connection with such modifications shall be and remain in Cedar. Cedar shall complete the modifications by September 15, 1986.

Beginning on August 31, 1986, Cedar shall initiate additional modification of the Plant in accordance with the plans and specifications to be approved by Rhone-Poulenc so as to enable Cedar to produce RP-10 as early as January 15, 1987 but no later than February 15, 1987. Cedar shall submit monthly invoices to Rhone-Poulenc for reimbursement of costs incurred in connection with said modifications beginning the 30th day of September, 1986 and monthly thereafter provided that the aggregate of said invoices shall in no event exceed the sum of \$425,000, except to the extent of any excess expenditures approved in writing by Rhone-Poulenc with respect to any changes in the scope of the work. Cedar shall retain title to all equipment and other facilities acquired by it in connection with such modifications, except for a glass-lined reactor which shall belong to Rhone-Poulenc Inc.

All invoices submitted by Cedar to Rhone-Poulenc for plant modifications shall be due and payable by Rhone-Poulenc within ten days from the date of such invoices. Cedar shall make available to Rhone-Poulenc upon request reasonably detailed documentation supporting the costs and other expenditures covered by such invoices, including any labor costs.

Method of Operation

Throughout all production campaigns under this Agreement, Rhone-Poulenc shall furnish Cedar, or cause it to be furnished, with raw materials in amounts sufficient to enable Cedar to produce the quantities of RP-15 and RP-10 required hereunder in a timely fashion so as to permit production of said Products in continuous campaigns of ninety days each, such raw materials to be furnished in bulk, FOB the Plant.

Cedar shall provide at the Plant receiving, storage and delivery facilities and services necessary to fully perform its obligations hereunder. Cedar shall take reasonable steps to preserve and protect raw materials and Products produced therefrom contamination, theft, damage or destruction while in Cedar's possession.

Cedar will inspect all raw materials tendered by Rhone-Poulenc hereunder, and promptly shall advise Rhone-Poulenc's designated representative of any apparent defects in such raw materials. Rhone-Poulenc shall provide to Cedar a weight ticket and certificate of analysis for all raw materials to be delivered by it hereunder.

Cedar shall ship Products in accordance with Rhone-Poulenc's instructions and at Rhone-Poulenc's sole cost and expense.

Title And Risk Of Loss

Title to raw materials delivered by Rhone-Poulenc to Cedar and title to Products produced by Cedar therefrom shall at all times remain solely in Rhone-Poulenc. Raw materials and Products shall be segregated from other materials and goods of Cedar.

Subject to the terms of this Agreement, Cedar shall assume the risk of loss of or damage to raw materials from the time of delivery to it hereunder, and for loss of or damage to work in process and to Products produced hereunder until delivery to Rhone-Poulenc's carrier at the Plant, except to the extent that such loss or damage results from Rhone-Poulenc's negligence. In no event shall Cedar be liable to Rhone-Poulenc for indirect or consequential damages alleged as a result of any such loss or damage.

Waste Disposal

Cedar's responsibility for handling waste generated as a result of its performance hereunder shall be (a) to neutralize said waste in such manner as will permit off-site disposal of same, and (b) to assist Rhone-Poulenc in the selection of a contractor to handle off-site treatment or disposal of such waste. The cost of all such off-site treatment or disposal of waste hereunder shall be borne directly by Rhone-Poulenc. Rhone-Poulenc shall indemnify Cedar and save it harmless from and against all costs or damages, including reasonable attorneys' fees incurred by it which shall arise out of transportation, storage or treatment of such waste in any manner approved by Rhone-Poulenc hereunder. However, such indemnification shall not apply to any costs or damages, including reasonable attorneys' fees incurred by Cedar which arise as a result of its negligence or its violation of any statute, ordinance or regulation.

Cedar shall make its best efforts to develop on-site disposal methods and processes to be carried out at the

Plant. In the event Cedar is successful in developing any such on-site waste disposal process, it shall also be responsible for obtaining and maintaining all required Federal and State Permits, and the parties shall negotiate in good faith to establish a reasonable waste disposal fee for such on-site treatment and disposal of waste generated hereunder.

Access To Plant/Assistance

Cedar shall keep Rhone-Poulenc fully and currently informed with respect to its modification and production activities hereunder and shall afford reasonable access to Rhone-Poulenc personnel to observe such operations. Rhone-Poulenc shall hold Cedar harmless from and indemnify it against all claims and liability on account of personal injuries suffered by Rhone-Poulenc personnel while at the Plant.

During the course of Plant modifications and start-up periods referred to herein, Rhone-Poulenc shall provide Cedar with on-site personnel capable of assisting Cedar in said activities, and shall provide such other services as Cedar shall reasonably request in order to accomplish the goals of this Agreement.

Warranties

Cedar warrants that all Products produced by it hereunder following the process confirmation start-up periods for RP-15 and RP-10, respectively, shall conform to the specifications attached hereto as Exhibits "B" and "C" respectively, as same shall be revised either during the process confirmation start-up periods or thereafter by consent of the parties hereto. Cedar makes no other warranty with respect to the Products to be manufactured hereunder, whether of merchantability or fitness for a particular purpose, and none shall be implied.

Cedar warrants that all raw materials furnished by it hereunder shall conform to the specifications included in Exhibits "D" hereunder.

Indemnification

Cedar agrees to hold Rhone-Poulenc harmless from and to indemnify against all loss, costs, damages, liability and expense, including reasonable attorney's fees, on account of any personal injury or property damage arising out of Cedar's manufacture, handling and storage of raw materials and Products hereunder during period when such materials are in Cedar's possession

and control, except to the extent that such occurrences are caused by the negligence of Rhone-Poulenc.

Rhone-Poulenc agrees to hold Cedar harmless from and to indemnify it against all loss, costs, damages, liability and expense, including reasonable attorney's fees on account of all personal injury or property damage arising out of occurrences relating to the handling, storage, transportation, sale or use of raw materials delivered to Cedar hereunder and RP-15 and RP-10 produced by Cedar hereunder when such materials are not in Cedar's possession and control, except to the extent that such occurrences are caused by the negligence of Cedar.

Payment of Processing Charges For RP-15 and RP-10

Cedar's total processing charge for undertaking the initial RP-15 campaign hereunder shall be the sum of \$435,000 which sum shall be invoiced by Cedar to Rhone-Poulenc in three equal monthly installments, the first to coincide with start-up of facilities at the Plant at the beginning of the initial RP-15 campaign, and the remaining two invoices to be issued at the end of each thirty days thereafter. The total processing charge so invoiced shall cover any amount of production of RP-15 during the initial ninety-day campaign up to 684,000 pounds. Additional production of RP-15 during the ninety-day campaign shall be invoiced to Rhone-Poulenc at the rate of thirty-five cents (\$.35) per pound. In the event the initial RP-15 campaign is extended beyond the original ninety-day period, additional production time will be charged to Rhone-Poulenc at the rate of \$175,000 per month, prorated for any period shorter than one month.

Cedar's total processing charge for undertaking the initial RP-10 campaign hereunder shall be the sum of \$550,000, which sum shall be invoiced by Cedar to Rhone-Poulenc in three equal monthly installments, the first to coincide with the start up of facilities at the Plant at the beginning of the initial RP-10 campaign, and the remaining two invoices to be issued at the end of each thirty days thereafter. The total processing charge so invoiced shall cover any amount of production of RP-10 during the initial ninety-day campaign up to 600,000 pounds. Additional production of RP-10 during the ninety-day campaign shall be invoiced to Rhone-Poulenc at the rate of thirty-five (\$.35) cents per pound. In the event the initial RP-10 campaign is extended beyond the original ninety-day period, additional production time will be charged to Rhone-Poulenc at the rate of \$200,000 per month, prorated for any period shorter than one month.

Cedar's Acknowledgement

Cedar acknowledges that it has received process information safety studies, Material Safety Data Sheets of all raw materials and waste streams and products from Rhone-Poulenc; and Cedar also acknowledges that it is a chemical manufacturer, knowledgeable in the safe handling of chemicals and qualified to perform the required manufacturing functions hereunder.

Usage Factors

During each process confirmation start-up period (each period to be for a maximum of seven consecutive days following initial start-up), it is understood that Cedar and Rhone-Poulenc shall agree upon usage factors for raw materials and waste by products.

Invention

Should any invention arise from an improved manufacturing process of RP-15 or RP-10 as a result of Rhone-Poulenc's or Cedar's efforts, such invention and any patent rights thereto should belong exclusively to Rhone-Poulenc Inc.

Failure To Issue Additional Purchase Orders

Cedar shall maintain the Plant, for future production campaigns during the initial term of this Agreement; provided, however, that Rhone-Poulenc shall issue future purchase orders to Cedar not later than June 1, 1987 and by June 1 of each successive calendar year during the term hereof for production of either RP-15 or RP-10, or both. In each case such campaigns shall be completed by May 31 of such contract year. If Rhone-Poulenc fails to issue such additional purchase orders, Cedar shall have the right to terminate this Agreement upon written notice to Rhone-Poulenc. Processing charges for such additional campaigns following June 1, 1987 shall be substantially identical to those applicable to the initial campaigns.

Force Majeure

No liability shall result from non-performance or delay in performance caused by circumstances beyond the reasonable control of the affected party; provided, however, that any party whose performance is prevented or impeded by such circumstances shall promptly provide written notice with reasonable particulars to the other party.

Notices

All notices required hereunder shall be deemed to be properly served as sent by first class mail, postage prepaid thereon or by telegram or overnight mail, and addressed to the party for whom intended at the following addresses:

If to Cedar:

Mr. G.L. Pratt
Cedar Chemical Corporation
24th Floor, Clark Tower
5100 Poplar Avenue
Memphis, Tennessee 38137

If to Rhone-Poulenc:

Mr. Jean-Pierre Dal Pont
Vice President of Technical Services
Rhone-Poulenc, Inc.
P.O. Box 125
Black Horse Lane
Monmouth Junction, New Jersey 08852

Default

Anything elsewhere in this Agreement to the contrary notwithstanding, if either party breaches any of its obligations hereunder, becomes insolvent or commits an act of bankruptcy, or if a receiver is appointed for either party, then in any such event the other party may terminate this Agreement effective fifteen (15) days following written notice of termination by reason of such default, provided such default shall not have been cured by the effective date of such notice.

Independent Contractor

Cedar's performance hereunder is not deemed to create an agency between the parties hereunder, it being understood that Cedar is acting solely as an independent contractor, and is solely responsible for the employment, control and conduct of its employees.

Secrecy Agreement

The Secrecy Agreement dated March 12, 1984 between Cedar and Rhone-Poulenc attached hereto as Exhibit "E" is incorporated herein by reference.

General Provisions

The parties further agree as follows: (a) This Agreement shall be governed by the laws of the State of Arkansas; (b) No modification of this Agreement or waiver of any of its provisions shall be effective unless in writing and signed by the party to be bound thereby. Neither party's waiver of any breach of any of the provisions of this Agreement shall be deemed to be a waiver of any subsequent breach of the same nature or of any breach of a different nature; (c) This Agreement shall bind the successors and assigns of the parties hereto, but neither party may assign its rights or interests in this Agreement without the prior written consent of the other party, which consent shall not be unreasonably withheld; provided that Cedar may assign its rights in this Agreement to any purchaser of the Plant and Rhone-Poulenc may assign its rights in this Agreement to a purchaser of substantially all of its pesticide business; (d) If the terms of any purchase orders or invoices are contrary to the terms and conditions of this Agreement, the terms and conditions of such purchase orders or invoices are superseded by the terms and conditions of this Agreement. The section headings in this Agreement are inserted for convenience only and are not to be construed as part of the Agreement nor as a limitation on the scope of the particular sections to which they refer.

Please indicate your agreement with these terms and conditions by signing and dating the original and two (2) copies of this Letter Agreement returning the original and a copy to me.

ACCEPTED AND AGREED TO:

CEDAR CHEMICAL CORPORATION

By: Ron Cheves
Ron Cheves
Vice President

Very truly yours,

RHONE-POULENC INC.

By: Jean Pierre Dal Pont
Jean-Pierre Dal Pont
Vice President of
Technical Services

Date: 9.5.86

Tackle® is a registered trademark of Rhone-Poulenc Inc.

RHÔNE-POULENC INC.

P.O. Box 125 Black Horse Lane - Monmouth Junction New Jersey 08852 - Telephone (201) 297-0100 - Telex 844527

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Vice President
Cedar Chemical Corporation
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EXHIBIT A



ADEQ0017705

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Wastes will be processed by Cedar, if necessary, and sent off site for disposal with Rhone-Poulenc being charged the actual commercial rate. The costs of such waste processing is included in the over-all processing charge. Cedar shall provide Rhone-Poulenc Inc. with a detailed statement concerning its methods of waste disposal and shall verify that such methods comply with existing Federal and State environmental laws. Prior to the disposition of any wastes, the parties shall mutually agree upon the waste disposal site. In the event Cedar can process wastes through the biological system at West Helena, Cedar will share the savings with Rhone-Poulenc Inc.

Production facilities prepared for this project will be maintained by Cedar and will be made available to Rhone-Poulenc for additional production campaigns during a three year period. Prices will be approximately the same as provided in the first campaign with appropriate escalatorsto be provided in a subsequent Contract between the parties. Cedar will require advance notice of intent by June 1, 1987 to produce and volumes required. At the time of notification, Rhone-Poulenc Inc. shall advise Cedar whether to proceed only with the coupling step or also with the nitration and neutralization steps.

Cedar will be responsible for raw material consumption following the start-up process confirmation period. However, Cedar shall pay for the loss of any raw materials as a result of its negligence or the failure of equipment. In the event material is not in accordance with specifications, Cedar shall make a good faith effort to reprocess the material in order to comply with specifications.

Rhone-Poulenc will provide containers for shipment of product FOB West Helena, Arkansas.

Rhone-Poulenc will provide all raw materials and bear the cost of all waste disposal.

Notwithstanding this Letter Agreement, it is also understood that all of the terms and conditions contained herein will be incorporated into a formal Contract which will be executed no later than August 29, 1986. The Contract will also make provision for additional terms and conditions covering such items as: indemnities, warranties, insurance etc.

Please indicate your agreement with these terms and conditions by signing and dating the original and two copies of this Letter Agreement returning the original and a copy to me.

Very truly yours,

RHONE-POULENC INC.

BY: Jean Pierre Dal Pont
Jean-Pierre Dal Pont
Vice President of
Technical Services

ACCEPTED AND AGREED TO:

CEDAR CHEMICAL CORPORATION

BY: Ron Cheves
Ron Cheves
Vice President

DATE: 8.1.86

Tackle^(s) is a registered trademark of Rhone-Poulenc Inc.

EXHIBIT A

RP-15 SPECIFICATION

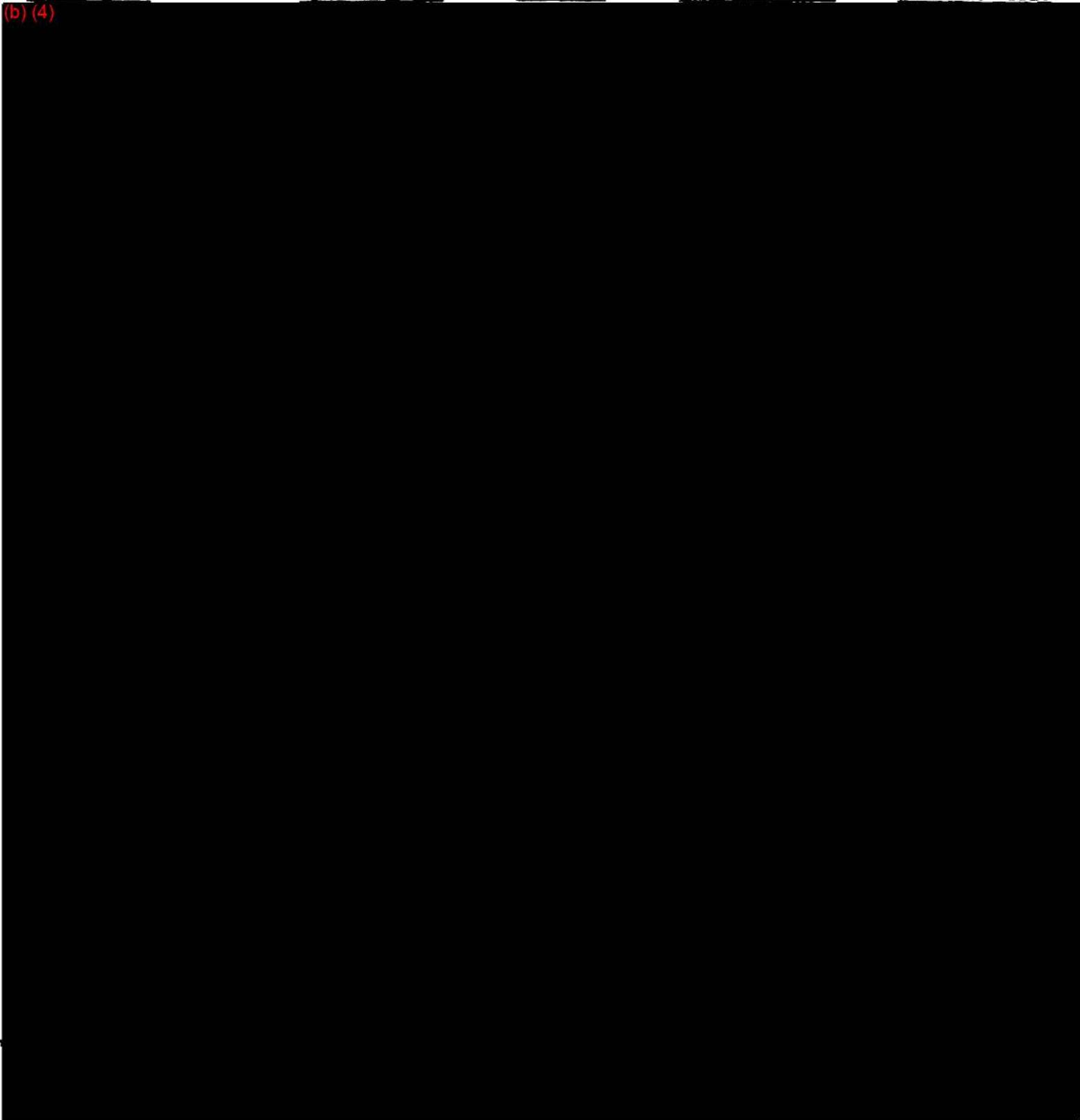
JPD
RC

RP-15	90.5% (minimum)
Light isomer	5.2% (maximum)
Heavy isomer	1.0% (maximum)
Water	2000 ppm (maximum)

1986-87 TACKLE 2AS CAMPAIGN - MANUFACTURING SPECIFICATIONS

JPD
RC

<u>RP No/Other</u>	<u>2AS Basis* Max. Mfg. Specification</u>	<u>Normally Expected Value</u>	<u>Present Confidential Stmt. of Form.</u>	<u>Proposed Confidential Stmt. of Form.</u>
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(b) (4)



Spec
F

Ashland Chemical Company

DIVISION OF ASHLAND OIL, INC.

INDUSTRIAL CHEMICALS & SOLVENTS DIVISION - P.O. BOX 3718, COLUMBUS, OHIO 43218 - (614) 889-1333

REPLY TO
831 Fifth Avenue South
Kent, Washington 98028
Phone: (206) 822-3631

ACETIC ANHYDRIDE

Physical Properties

Formula	$\text{CH}_3\text{COOCOCH}_3$
Formula Molecular Wt.	102.09
Specific Gravity 20/20°C	1.0830
Boiling Point 760 mm	139°C
Vapor Pressure mm Hg	4 @ 20°C
Freezing Point	-74.1°C
Solubility: in water/water in	Decomposes
Pounds per gallon @ 20°C	9.01
Flash Point ASTM D1310	136°F

Divisional Technical Center
Diamond Shamrock Corporation
P O Box 191
Painesville Ohio 44077
216-357-3811

Muscle Shoals Plant 45% Liquid Caustic Potash Commercial Grade



Diamond Shamrock

(1974)

Technical Bulletin

1581-A

<u>Component</u>	<u>Basis</u>	<u>Typical Analysis⁽¹⁾</u>
Total Alkalinity (as KOH)	Wt. %	45.7
Hydroxide Alkalinity (as KOH)	Wt. %	45.7
K ₂ CO ₃	Wt. %	0.05
KCl	Wt. %	0.0035
KClO ₃	Wt. %	< 0.0001
K ₂ SO ₄	ppm by wt.	< 10
Fe	ppm by wt.	0.5 ⁽²⁾
Na	ppm by wt.	800
Ni	ppm by wt.	< 0.1
Hg	ppm by wt.	< 0.05
Heavy Metals (as Pb)	ppm by wt.	< 5
As	ppm by wt.	< 1

Typical Analysis

Not to be used as a specification

Notes:

1. Meets Food Chemicals Codex and U.S. Pharmacopeia specifications.
2. Iron value applies to material shipped only in lined containers.

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JUN 6 1985

JU1HB

EXHIBIT D

PURCHASING

All information, recommendations and suggestions appearing in this bulletin concerning the use of our products are based upon tests and data believed to be reliable; however, it is the user's responsibility to determine the suitability for his own use of the products described herein. Since the actual use by others is beyond our control, no guarantee, expressed or implied, is made by Diamond Shamrock Corporation as to the effects of such use or the results to be obtained, nor does Diamond Shamrock Corporation assume any liability arising out of use by others of the products referred to herein. Nor is the information herein to be construed as absolutely complete since additional information may be necessary or desirable when particular or exceptional conditions or circumstances exist or because of applicable laws or government regulations. Nothing herein contained is to be construed as permission or as a recommendation to infringe any patent.

ADEQ0017705

LEP**CHEMICALS &
PLASTICS INC.****PRODUCT SHEET**CAUSTIC POTASH, LIQUID (POTASSIUM HYDROXIDE - KOH)LOW CHLORIDE GRADESPECIFICATIONSTOTAL ALKALINITY
CALCULATED AS KOH

45-52% BY WT.

K₂CO₃

0.2 % BY WT. (MAX.)

NAOH

0.25% BY WT. (MAX.)

KCL

50 PPM (MAX.)

SiO₂

20 PPM (MAX.)

KClO₃

3 PPM (MAX.)

K₂SO₄

10 PPM (MAX.)

Fe

3 PPM (MAX.)

Ca

3 PPM (MAX.)

Hg

0.5 PPM (MAX.)

Mg

3 PPM (MAX.)

CAS REGISTRY NO. 1310-58-3

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ISSUED MAY, 1982

MAR 24 1983

12/82

EXHIBIT D

(Continued on reverse side)

ADEQ0017705

Divisional Technical Center
Diamond Shamrock Corporation
P O Box 191
Painesville Ohio 44077
216/357-3811

Specs →

50% Liquid Caustic Soda
Diamond Brand



Diamond Shamrock

(1158)

Technical Bulletin

1769

Component	Basis	Sales ⁽¹⁾ Specification	
Total Alkalinity as Na ₂ O	Wt. %	38.7	Min.
Hydroxide Alkalinity as NaOH	Wt. %	50.0	Min.
Na ₂ CO ₃	Wt. %	0.15	Max.
NaCl	Wt. %	1.10	Max.
NaClO ₃	Wt. %	0.12	Max.
Na ₂ SO ₄	ppm by wt.	400	Max.
Fe	ppm by wt.	9.0	Max.
Cu	ppm by wt.	0.2	Max.
Ni	ppm by wt.	2.0	Max.
Hg	ppm by wt.	0.05	Max.
Heavy Metals (as Pb)	ppm by wt.	15	Max.
As	ppm by wt.	1.5	Max.

Notes:

1. Meets Food Chemicals Codex and U.S. Pharmacopeia specifications.
2. Iron value applies to material shipped only in lined containers.

F2HB

EXHIBIT D

PURCHASING
FEB - 6 1984
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All information, recommendations and suggestions appearing in this bulletin concerning the use of our products are based upon tests and data believed to be reliable; however, it is the user's responsibility to determine the suitability for his own use of the products described herein. Since the actual use by others is beyond our control, no guarantee, expressed or implied, is made by Diamond Shamrock Corporation as to the effects of such use or the results to be obtained, nor does Diamond Shamrock Corporation assume any liability arising out of use by others of the products referred to herein. Nor is the information herein to be construed as absolutely complete since additional information may be necessary or desirable when particular or exceptional conditions or circumstances exist or because of applicable laws or government regulations. Nothing herein contained is to be construed as permission or as a recommendation to infringe any patent.



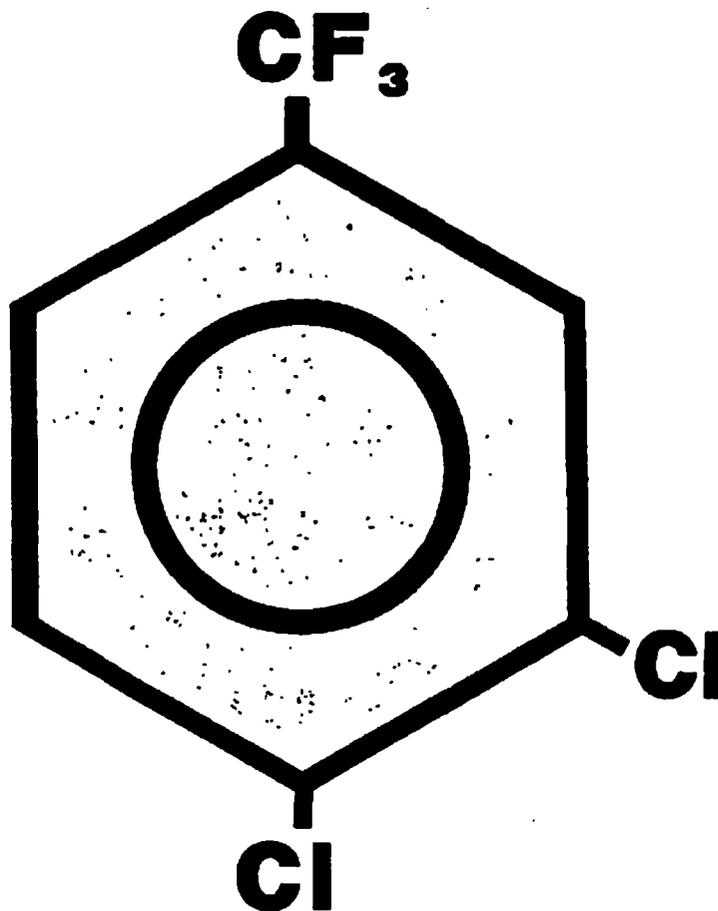
Occidental Chemical Corporation

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FEB 4 1985

PURCHASING

Industrial & Specialty Chemicals Division



3,4-DICHLOROBENZOTRIFLUORIDE

3,4-Dichlorobenzotrifluoride is a clear, colorless liquid with a faint organic odor. It is useful as a chemical intermediate in the manufacture of pesticides and other products.

The product is one of a family of products offered by the Industrial and Specialty Chemicals Division based on a history of research and development of benzotrifluoride derivatives.

EXHIBIT D

3,4 DICHLOROBENZOTRIFLUORIDE

Specifications:

Appearance: Clear, colorless liquid
Assay: 99.0% minimum
Other: 0.1% maximum low boilers
0.1% maximum high boilers
0.8% other DCBTF isomers

Molecular Weight:

202.99

Formula:

$C_6H_2Cl_2F_3$

Physical Properties:

Melting Point - 12.4°C
Boiling Point 173.5°C
Specific Gravity (25°C) 1.478 (12.3 lbs/gal)
Flash Point (Tag Closed Cup) 170°F
Vapor Pressure (mm Hg)
2 mmF 24.6°C
22 mmF 71.8°C
216 mmF 10.1°C
694 mmF 169.9°C
Refractive Index, n_{25}^D 1.4736

Shipping Containers

Containers (Approximate Capacities)

	Gallons	Pounds
Tank Trailer	3,250	40,000 (partial load)
Drums: (non-returnable)	55	650 (net) 685 (gross)



Shipping Information:

Domestic Shipment Description

DOT Name: Combustible Liquid, N.O.S
Technical Name: 3,4-Dichlorobenzotrifluoride
Hazard Class: Combustible Liquid
Label Required: None
Identification No.: NA 1993

Shipping Document Description

DOT Rail:
Combustible Liquid, N.O.S.,
(3,4-Dichlorobenzotrifluoride), NA 1993,
Placarded Combustible

DOT Highway:
Combustible Liquid, N.O.S.,
(3,4-Dichlorobenzotrifluoride), NA 1993,
Chemicals NOI

Drum Quantities: (non-regulated)

U.S. Department of Transportation Requirements

MARKING

Packages of 3,4-Dichlorobenzotrifluoride having rated capacities of 110 gallons or less do not require marking (49 CFR 172.118[a]). Bulk shipments in portable tanks, cargo tanks and tank cars must be marked with the assigned DOT identification number, 1993, on orange panels or placards (49 CFR 172.326, 172.328, 172.330 and 172.332).

LABELING

A DOT hazard warning label is not required on packages containing 3,4-Dichlorobenzotrifluoride (49 CFR 172.400[b][9]).

PLACARDING

Cargo tanks, tank cars and portable tanks containing 3,4-Dichlorobenzotrifluoride being offered for transportation must carry the numbered DOT Combustible placard as illustrated below. Freight containers, motor vehicles and rail cars carrying 3,4-Dichlorobenzotrifluoride packed in drums of 110 gallons or less are exempt from placarding (49 CFR 172.504 Table 2, note 3).



DOT Placard for bulk shipments

The Code of Federal Regulations, Title 49, should be consulted for additional information, exceptions or alternatives for marking, labeling and placarding full and empty containers. The above references cite general transportation rules.

PRODUCT LABEL

3,4-DICHLOROBENZOTRIFLUORIDE (3,4-DCBTF)

CAUTION! COMBUSTIBLE LIQUID
MAY BE HARMFUL IF INHALED OR ABSORBED THROUGH SKIN
MAY CAUSE EYE AND SKIN IRRITATION



OCC SUGGESTED FIRE HAZARD RATING
FLASH POINT (TAG C.C.)
170°F

FOR INDUSTRIAL USE ONLY

PRECAUTIONS

- Keep container closed
- Keep away from heat and open flame
- Insure adequate ventilation or use an organic acid vapor mask.
- Avoid contact with eyes, skin, and clothing.
- Avoid breathing vapor
- Wash thoroughly after handling
- Use of goggles and rubber gloves is suggested
- **DO NOT REUSE THIS CONTAINER** Toxic and explosive product residues or vapors may remain in this container. All labeled precautions **MUST** be observed. Containers should be disposed of in a manner meeting government regulations.
- Do not apply air pressure, puncture or weld on or near this container. Be safe — keep away from heat, sparks or flames.
- **PRODUCT DISPOSAL** Product should be completely removed from this container. Material that cannot be used or chemically reprocessed should be disposed of in a manner meeting government regulations.

HANDLING & STORAGE

- Store in an NFPA Class II area.
- IN CASE OF:**
 - FIRE**—Use water spray, foam, dry chemical or CO₂.
Use air supplied respirator or full protective equipment.
Fire may liberate toxic gases.
 - SPILL**—Contain spill and pump into drum. Soak up small spill with sand, earth or commercial absorbents and transfer into a suitable container.
Notify authorities if material is spilled into a sewer or regulated waters. Do not use water.
- **EMERGENCY PHONE**
CHEMTREC 1-800/424 9300

+ FIRST AID +

- In case of contact, immediately remove contaminated clothing and shoes. Flush contaminated skin with plenty of water.
- In case of eye contact, immediately flush eyes with a directed stream of water for at least 15 minutes, forcibly hold eyelids apart to ensure complete irrigation of all eye and lid tissue. Call a physician.
- If inhaled, remove to fresh air.
- If swallowed, do not induce vomiting. Call a physician.
- Wash clothing before reuse.

NA 1993
CAS No. 328-84-7



Occidental Chemical Corporation
Industrial & Specialty Chemicals Division

Net Weight 295 Kg.
650 lb.

11-7/83
LP-99-88



Occidental Chemical Corporation
Industrial & Specialty Chemicals Division

Occidental Chemical Center, 360 Rainbow Boulevard South
Box 728 Niagara Falls New York 14302 716/286-3000

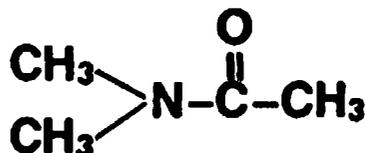
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EXHIBIT D

ADEQ0017705

DIMETHYLACETAMIDE

RECEIVED
SEP 02 1983



N,N-Dimethylacetamide (DMAC) is a powerful and versatile industrial solvent featuring wide organic and inorganic solubility, water miscibility, high boiling point, low freezing point and good stability. DMAC is not "photochemically reactive" as defined in Los Angeles County's Rule 66, Section k. Some states control all volatile organic compounds irrespective of their photochemical reactive nature. Consult the appropriate state pollution control regulations.

The Chemical Abstracts index name for DMAC is acetamide, N,N-dimethyl-, (CAS Registry Number 127-19-5). Du Pont offers high purity DMAC for industrial use only. Table I lists specifications and typical analyses of Du Pont DMAC. Du Pont also sells a closely related amide solvent, N,N-dimethylformamide (DMF).

PROPERTIES

Solvency—DMAC is an essentially neutral, non-hydroxylic, aprotic solvent with a high dielectric constant. Its solvent power is due in part to having three pairs of available electrons for hydrogen bonding.

Solubility—DMAC is completely miscible in water, ether, esters, ketones and aromatic compounds. DMAC is generally soluble in unsaturated aliphatic compounds and more soluble than DMF in saturated aliphatics.

Stability—Dimethylacetamide is stable up to its atmospheric boiling point in the absence of acidic and alkaline materials. It distills essentially unchanged with no color or acid formation. Above 350 C (662 F), degradation to dimethylamine and acetic acid occurs.

TABLE I
SPECIFICATIONS AND TYPICAL ANALYSES
DU PONT DIMETHYLACETAMIDE
TECHNICAL GRADE

	Specifi- cations	Typical Analyses*
Water, %	0.05 max.	0.02
Color (APHA)	10 max.	2
Conductivity, 25 C (77 F) 20% aq sol'n		
micromhos/cm	25 max.	12
μS/m	2500 max.	1200
Distillation range for 1 to 95 vol %, (at 760 mm Hg and includes 166.0 C ± 0.2 C), C	2.0 max.	0.6
pH at 25 C (77 F), 20% aq sol'n	4.0-7.0	4.7

*This column gives typical analyses based on historical production performance. Du Pont does not make any express or implied warranty that all future production will demonstrate or continue to possess these typical properties.

Hydrolysis—DMAC shows only a slight tendency to hydrolyze in aqueous solutions at elevated temperatures. The hydrolysis rate increases in the presence of acids or alkalis.

NOTICE: DMAC is harmful if inhaled or absorbed through the skin. See Personal Safety and First Aid on page 2 and the Caution For Distributors, Resellers, Formulators and Users of DMAC on page 6.

The information set forth herein is furnished free of charge and is based on technical data that Du Pont believes to be reliable. It is intended for use by persons having technical skill and at their own discretion and risk. Since conditions of use are outside our control, we make no warranties, express or implied, and assume no liability in connection with any use of this information. Nothing herein is to be taken as a license to operate under or a recommendation to infringe any patents.

Solvolysis—Like other aprotic solvents (e.g. tetrahydrofuran, dimethylformamide, dimethyl sulfoxide), DMAC is capable of influencing substitution and elimination reactions. DMAC strongly stabilizes cations through dipole-cation interactions and minimizes the electrostatic attraction between anion and cation. Its electrical insulating action retards ion aggregation.

Hazardous Chemical Reactions—With halogenated compounds, DMAC acts as a dehydrohalogenation reagent. With certain highly halogenated compounds like carbon tetrachloride or benzene hexachloride, the reaction is highly exothermic and may become violent, particularly in the presence of iron. It is recommended that mixtures of DMAC and halogenated compounds never be used or stored in metal containers without first testing the particular system. Mixtures of DMAC and sodium hydride have been reported to generate heat and should be considered potentially hazardous.

Extreme caution must be exercised if strong oxidizing agents are to be mixed with DMAC. Use of DMAC as a reaction solvent is known to increase the rate and heat evolution of many organic reactions. It is therefore recommended that any evaluation of DMAC be initially carried out on a small scale, with gradual scale-up to thoroughly familiarize operating personnel with the characteristics of a particular reaction. Furthermore, once safe operating conditions have been established, care must be taken to see that they are not altered without first evaluating the new conditions on a small scale.

PERSONAL SAFETY AND FIRST AID

Health Hazards

DMAC is capable of producing systemic injury when inhaled or absorbed through the skin in sufficient quantities over a prolonged period of time. The principal effect is cumulative damage to the liver. DMAC has a low order of acute toxicity when swallowed or upon brief contact of the liquid or vapor with the eyes or skin. The LD₅₀ (oral, male rats) for DMAC is 5809 mg/kg.

Although DMAC is not a skin sensitizer, it is irritating to the skin and eyes. DMAC has shown embryotoxic properties in test animals. See the paragraph below on Embryotoxicity.

The U.S. Department of Labor (OSHA) has ruled that an employee's exposure to dimethylacetamide in any 8-hour work shift of a 40-hour work week shall not exceed a time-weighted average of 10 ppm DMAC vapor in air by volume or 35 mg of DMAC per cubic meter of air. They also caution that, since both the liquid and vapor of DMAC are capable of penetrating the skin and mucous membranes, control of vapor inhalation alone may

not be sufficient to prevent absorption of an excessive dose (29 CFR 1910.1000 Air Contaminants)*

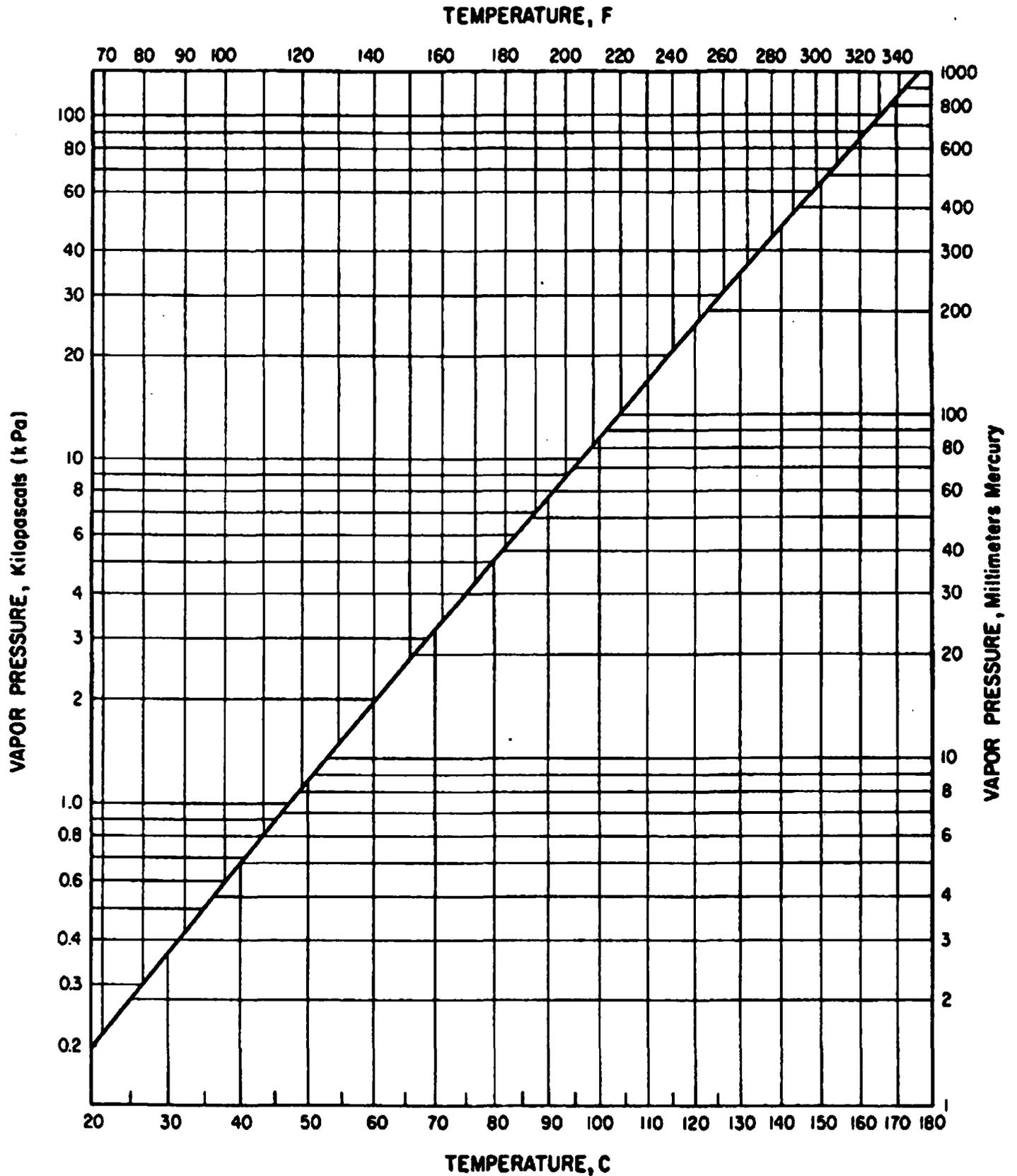
**TABLE II
PROPERTIES* OF
DIMETHYLACETAMIDE (DMAC)**

Molecular weight	87.12
Boiling point (760 mm Hg), C	166.1
F	331
Freezing point, C	-20
F	-4
Vapor pressure, 25 C (77 F), mm Hg	2.0
(See Figure 1)	psia 0.04
	kPa 0.27
37.8 C (100 F), mm Hg	4.4
	psia 0.09
	kPa 0.59
Density, 15.6 C (60 F), g/mL (Mg/m ³)	0.945
(See Figure 2)	lb/gal 7.88
Viscosity, 25 C (77 F), cP (mPa·s)	0.92
Surface tension, 30 C (86 F), dyn/cm (mN/m)	32.43
Refractive index, n _D ²⁵	1.4356
Heat of vaporization (at bp), kcal/g·mol	10.36
	Btu/lb 214
	kJ/kg 498
Heat of combustion (-ΔH _c), 20 C (68 F)	
	kcal/g·mol 608
	Btu/lb 12,562
	MJ/kg 29.20
Thermal conductivity, 22.2 C (72 F)	
	kcal·m/m ² ·h·C 0.1579
	Btu·ft/ft ² ·h·F 0.1005
	W/m·K 0.1742
Flash point (TOC), C	70
F	158
(TCC), C	63
F	145
Autoignition temperature, C	490
F	914
Flammability limits in air, vol %	
lower, 100 C (212 F)	1.8
200 C (392 F)	1.5
upper, 160 C (320 F)	11.5
Critical temperature, C	385
F	725
Critical pressure, atm	39.7
MPa	4.02
Dielectric constant, ε, 10 kHz, 25 C (77 F)	37.8
Dipole moment, μ, 20 C (68 F) Debye units	4.60
Solubility parameter, δ	10.8
Hydrogen-bonding index, β	6.6

*These property data are drawn from various DuPont and literature sources. DuPont does not make any express or implied warranty that the commercial product will have these properties.

*Due to changing governmental regulations such as those of the Department of Transportation, Department of Labor, U.S. Environmental Protection Agency and the Food and Drug Administration, references herein to governmental requirements may be superseded. Each user should consult and follow the current governmental regulations, such as Hazard Classifications, Labeling, Food Use Clearances, Worker Exposure Limitations and Waste Disposal Procedures for the up-to-date requirements for dimethylacetamide.

FIGURE 1 VAPOR PRESSURE OF DIMETHYLACETAMIDE



Embryotoxicity

In laboratory tests, application of DMAC to the skin of pregnant rats has caused fetal deaths when the dosages were close to the lethal dose level for the mother. Embryonal malformations have been observed at dose levels 20% of the lethal dose and higher. However, embryotoxicity has not been reported at dose levels comparable to the inhalation dose a woman could receive from air contaminated with DMAC to the maximum level allowed by the Department of Labor. (See Health Hazards.) Women of childbearing potential may be employed in operations where the air concentration is within the limits set by the Department of Labor and there is no opportunity for liquid contact.

Safety Precautions

Adequate ventilation must be provided by keep DMAC vapor concentrations within the time-weighted average of 10 ppm prescribed by the Department of Labor. Contact of DMAC liquid or mixtures containing DMAC with the eyes, skin, and clothing should be avoided. If contact is unavoidable, appropriate personal protective equipment, including chemical safety goggles, butyl rubber gloves, rubber or neoprene-coated clothing, and respirators supplied with fresh air should be worn.

First Aid

If inhaled, remove patient to fresh air. If breathing has stopped, give artificial respiration, preferably mouth to mouth. If breathing is difficult, give oxygen. Call a physician.

In case of contact with DMAC liquid, immediately flush eyes or skin with water for at least 15 minutes while removing contaminated clothing and shoes. Call a physician. Wash clothing before reuse. Destroy contaminated shoes.

Personal Protective Equipment

The following personal protective equipment should be available and worn as needed:

- Hard hat with brim
- Safety spectacles (side shields preferred)
- Chemical splash goggles
- Full length face shield
- DMAC-resistant butyl rubber gauntlet gloves^a
- DMAC-resistant butyl rubber apron
- DMAC-resistant butyl rubber boots
- Appropriate respiratory protection^c

^a Available from NORTON SAFETY PRODUCTS DIVISION, 2000 Plainfield Pike Cranston, RI 02920

^c See "A Guide to Industrial Respiratory Protection" HEW Pub. No. (NIOSH) 76-189

A full DMAC-resistant butyl rubber suit (jacket, pants and hood) with breathing air supply will provide protection from DMAC contact and inhalation. This suit must be worn not only in emergencies but also when performing work where there is substantial possibility of direct repeated contact with DMAC.

Neoprene is abrasion resistant, and therefore, neoprene gloves are recommended for DMAC area operations. However, neoprene coated cotton gloves offer only fair protection from DMAC. Neoprene coated gloves which have contacted liquid DMAC should be discarded.

Butyl rubber gloves such as Norton Style B-161R or B-324R^a are resistant to DMAC solvency and offer good protection from DMAC. Butyl rubber gloves should be worn in all operations where contact with liquid DMAC is likely. These gloves are designed to protect against accidental contact and are not intended for routine immersion in DMAC or continuous handling of DMAC-wetted parts. Butyl rubber is not very resistant to cuts or abrasion. Therefore, butyl gloves should be frequently inspected and discarded when they show cuts, tears, pinholes or signs of wear.

Design of DMAC facilities should avoid routine gloved contact with DMAC liquid or parts wetted with DMAC.

Special Safety Facilities

The following safety facilities should be readily accessible in all areas where DMAC is handled or stored:

- safety showers—or water hoses connected to spigots with quick opening valves which stay open
- eye wash fountains—or other means for washing the eyes with a gentle flow of filtered, moderately warm tap water.

Determination of DMAC in Air

The measurement of DMAC in air can be accomplished by passing a known amount of air through water in a gas-scrubbing vessel and analyzing the solution chemically or by gas chromatography. Chemical analysis involves hydrolysis to dimethylamine. For determination by gas chromatography, the solution may be injected directly into a suitable column. An acceptable gas chromatography technique for DMAC is NIOSH Method No. S254 (NIOSH Manual of Analytical Methods, Volume 3, U.S. Department of Health, Education and Welfare, Public Health Service, Center for Disease Control, National Institute for Occupational Safety and Health). The NIOSH Method uses adsorption on silica gel followed by desorption with methanol.

DMAC in air can also be measured by infrared absorption or by colorometric analysis of a pyrolyzed air

FIGURE 2 DENSITY OF DIMETHYLACETAMIDE

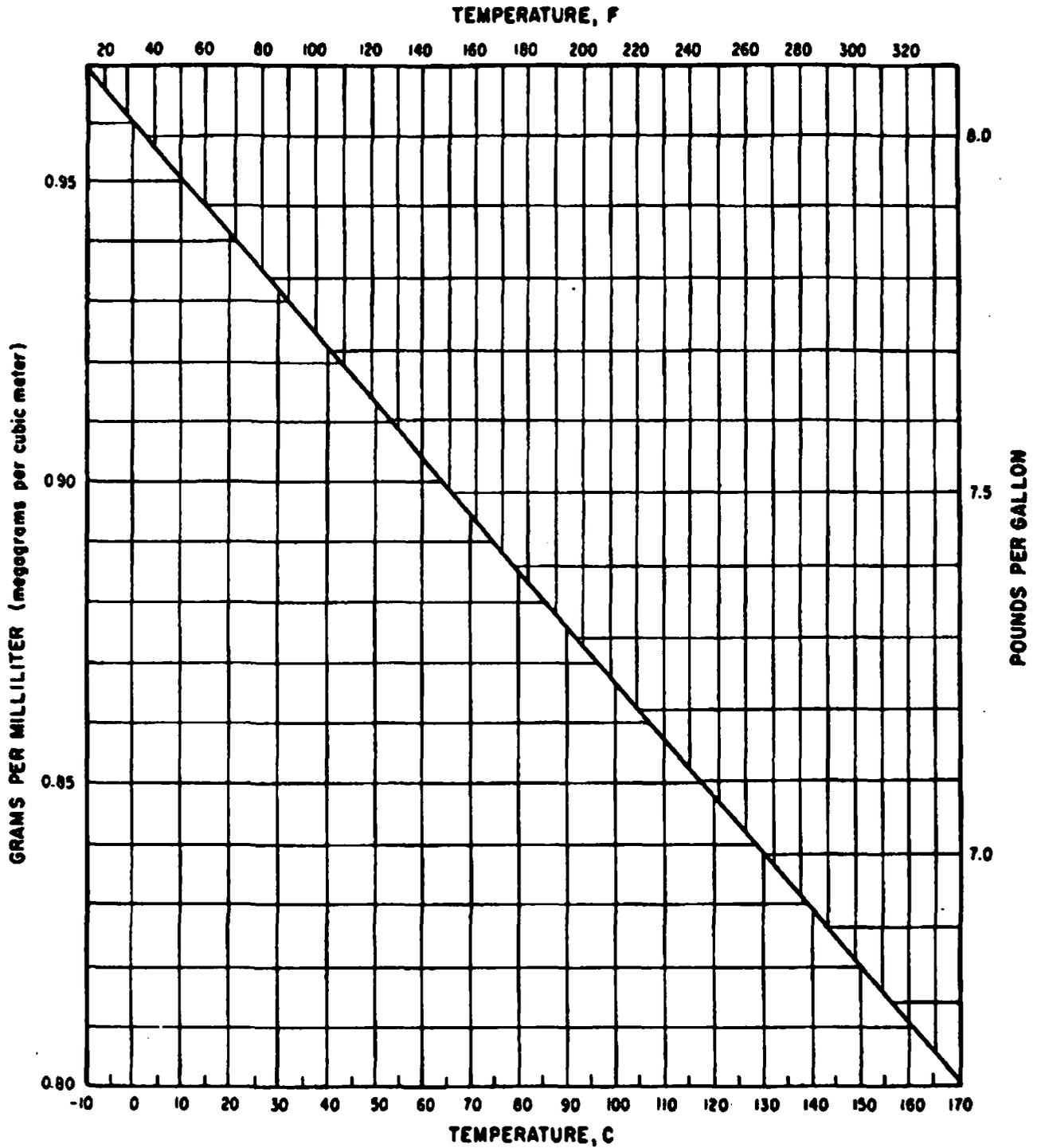


EXHIBIT D

sample. The colorimetric technique measures concentrations of 5-80 ppm DMAC in air using the MSA Universal Tester (complete with Air Sampling Pump, Pyrolyzer and Part Number 91624 Organic Nitrogen Detector Tubes available from Mine Safety Appliances Company, 408 Penn Center, Pittsburgh, PA 15235)

USES

DMAC is a uniquely versatile and powerful solvent with the following properties

- Wide Liquid Range
- Thermal Stability
- Chemical Stability
- Water Miscibility
- Wide Organic and Inorganic Solvency
- High Polarity

Many hard-to-dissolve materials are soluble in DMAC. In some cases, the material is dissolved in a relatively small amount of DMAC and then the mixture is taken up in a large volume of second solvent. Sometimes the final solution contains only a small percentage of DMAC. But even when DMAC is only a minor ingredient in the solution, the cautionary information covered in the PERSONAL SAFETY and FIRST AID section above still applies.

DMAC in Mixtures and Consumer Products—DMAC is sold by Du Pont for industrial use only. It should *not* be used in consumer products.

In combinations of DMAC with other solvents and chemicals, the partial vapor pressure of DMAC will be lower than for pure DMAC and the rate of absorption through the skin may be slower than for pure DMAC. Nevertheless, it must be recognized that even when DMAC is a relatively minor component of a formulation, it may in some circumstances still contribute more than 10 ppm vapor to the air (exceeding the OSHA limit) and can still be absorbed through the skin in case of skin contact. This is especially pertinent if the formulation is spread in a thin film, over a large surface area having limited ventilation. Processing at elevated temperatures also requires special attention to adequate ventilation.

Other factors to be considered by formulators are whether the formulation or mixture containing DMAC is likely to be used by the general public or by women of childbearing age and whether spills or splashing of the product are likely to be encountered in normal use.

CAUTION: Distributors, resellers, formulators and users of DMAC and mixtures or products containing DMAC have the responsibility of providing adequate information on safety,

toxicity including embryotoxicity, and safe handling procedures to their employees and customers.

Resin and Polymer Solvent—DMAC's strong solvent action makes it particularly useful in the manufacture of films and fibers and as a booster solvent in coating and adhesive formulations. Polymers containing over 50% vinylidene chloride are soluble to 20% at elevated temperatures in DMAC. In many cases DMAC solutions have higher solids content at practical working viscosities, resulting in more economical formulations than is possible with lower cost but less powerful solvents. DMAC may be particularly useful for dissolving.

Polyacrylonitrile	Cellulose derivatives
Polyvinyl chloride	Styrenes
Polyamides	Linear polyesters
Polyimides	

Reaction Catalyst and Medium—DMAC is useful as a reaction medium because it is an excellent solvent for a variety of organic and inorganic compounds. Due to its high dielectric constant and solvating ability, DMAC may participate in the reaction mechanism and frequently the effect is catalytic. This often results in higher yields under less vigorous conditions than is possible with other solvents. The products frequently may be isolated by adding water to the reaction mixture. Typical of reactions that may be benefited by the use of DMAC are:

Elimination reactions such as dehydrohalogenation and dehydrogenation

Cyclizations

Halogenations

Preparation of nitriles

Alkylations

Interesterifications

Phthaloylations

Preparation of organic acid chlorides.

Crystallization and Purification Solvent—The unusual solvent power of DMAC has been found useful in the purification by crystallization of aromatic dicarboxylic acids such as terephthalic acid and p-carboxyphenylacetic acid. DMAC and dibasic acids form crystalline complexes containing two moles of the solvent for each mole of acid.

Electrolytic Solvent—The use of DMAC as a nonaqueous electrolytic solvent is promising because salts are moderately soluble in DMAC and appear to be completely dissociated in dilute solutions

STORAGE AND HANDLING

Persons handling DMAC in drums or in bulk quantities should be thoroughly familiar with DMAC hazards and safe handling practices. Refer to the Du Pont bulletin "Dimethylformamide (DMF)—Properties, Uses, Storage and Handling" for more detailed information on a product whose storage and handling requirements are similar to those of DMAC. This publication is available from any Du Pont Sales Office listed on the back page

Storage—DMAC is stored and handled in steel equipment and is usually handled at ambient temperatures. DMAC freezes at -20 C (-4 F). It is combustible and is thermally stable below 350 C (662 F) if uncontaminated

Aluminum or stainless steel equipment is recommended for handling DMAC where stringent color or iron contamination requirements are present. Mild steel is *not* recommended for high temperature service or for handling water solutions containing less than 83 percent DMAC. Many plastics are dissolved or softened by DMAC. White asbestos or TEFLON® TFE or FEP fluorocarbon resins are the preferred materials for gaskets and packing.

DMAC is hygroscopic and should be stored and handled in equipment designed to minimize moisture pickup.

Fire Hazard—DMAC is a Class II combustible liquid as defined by OSHA regulations. Its flash point, 63 C (145 F), is above the temperature at which it is normally stored and handled. However, DMAC should be stored and used in areas protected from flame, sparks, or excessive heat. Storage tanks and equipment should be electrically grounded

In the event of fire, fire-fighting personnel should wear respiratory protection with breathing air supply and fight fires from upwind. Use water spray, foam, dry chemical, or carbon dioxide to extinguish fires.

Use caution in approaching an advanced or massive fire where confined DMAC is exposed to high heat or flame because in these circumstances this material may decompose rapidly and exothermically, and rupture the containing vessel

Smoke and fumes from burning DMAC may be harmful upon inhalation or skin contact and, therefore, must be avoided

When contact with smoke is not avoidable, wear full protective equipment with breathing air supply.

Engineering Control of Hazards—DMAC storage and handling facilities and operating areas should include the following key elements.

- Store and handle DMAC in totally enclosed equipment where possible, or in systems designed to avoid human contact. If contact cannot be avoided, personnel must wear proper personal protective equipment because DMAC is readily absorbed through the skin
- Unloading and process facilities must isolate DMAC from chemicals with which it reacts violently. See Hazardous Chemical Reactions on page 2
- DMAC is a combustible liquid and should be stored and used in areas protected from flames, sparks and excessive heat.
- Storage tanks and equipment should be electrically grounded.
- Electrical equipment, wiring and fixtures must meet the requirements of the National Electrical Code, Article 500.⁶
- Vents and pressure relief devices must be designed to handle pressure limitations and volumes of vapor that could be expected in emergency conditions.
- The process and storage tank vents should be located so that toxic, flammable vapors given off during fires or emergency conditions will not harm personnel or increase the fire hazard.
- Dikes, waste drains and collection facilities must be provided to contain possible spills or leaks during unloading and other transfers. DMAC spills, leaks and rinsings must be safely collected for later disposal or recovery
- The storage and process layout must include provisions for more than one escape route in the event of fire, explosion or release of toxic vapors or liquid.
- The following safety facilities should be provided: readily accessible safety showers, fire extinguishers and other fire fighting equipment, water hydrants or hoses with spray nozzles for flushing and other emergency equipment such as chemical-proof suits and respiratory apparatus.
- In addition to engineering controls, thorough operator training, written operating instructions, safety rules, check lists, work permit and flame permit procedures are required to assure safe operation.

Spills—Spills or leaks of DMAC should be taken care of promptly. They should be contained where possible in a suitable collection system (tank or sump) designed to minimize personnel exposure and pollution. Spills or

⁶ Available from National Fire Protection Association, 470 Atlantic Ave., Boston, MA 02210

leaks may be dammed with sand or earth. Dry sand or absorbents such as "Oil-Dri" may be used to soak up the liquid. Shovel wet absorbents into steel drums with lids for disposal. Wash down the area with water to remove final traces of DMAC. Wear full protective equipment including breathing air during clean-up operations. Rope off and evacuate areas affected by spills or leaks.

When disposal of DMAC is necessary, waste disposal measures must comply with all Federal, State and local air and water pollution regulations.

SHIPPING CONTAINERS

DMAC is available in 55-gallon (430-lb, 195-kg net) steel drums and in tank truck and tank car quantities.

Dimethylacetamide is regulated as a Hazardous Material by the Department of Transportation (DOT). The DOT Hazard Class is COMBUSTIBLE LIQUID (49 CFR 172.101, Hazardous Materials Table). Combustible Liquids are not regulated by DOT in containers having a capacity of 110 gallons or less (49 CFR 173.118a, Exceptions for combustible liquids). The DOT Identification Number is NA1993.

E. I. du Pont de Nemours & Co. (Inc.) • Wilmington, Delaware 19898

U.S. Sales Offices

CHARLOTTE NC 28230
6250 Fairview Rd., P O Box 30517
704-364-1550

CHICAGO IL 60631
O Hare Plaza, Suite 760
5725 E. River Rd
312-635-1220

CLEVELAND OH (Suburban)
6100 Rockside Woods Boulevard
Suite 255
Independence, OH 44131-2380
216-447-0868

HOUSTON TX 77056
Suite 1620, Post Oak Tower
713-877-8859

NEW YORK NY 10118
Rm 1129, Empire State Bldg
350 Fifth Ave
212-971-4000

PHILADELPHIA PA (Suburban)
308 E Lancaster Ave
Wynnewood, PA 19096
215-896-2000

SAN FRANCISCO CA 94111
Suite 3110
50 California Street
415-391-7300

International Sales Offices

CANADA
Du Pont Canada Inc
Box 660
Montreal S, P O H3C 2V1
514-861-3861

Du Pont Canada Inc
P O Box 2300
Streetsville Postal Station
Mississauga, Ontario
L5M 2J4
416-821-5570

LATIN AMERICA
Du Pont Co
Chemicals and Pigments
Latin America Sales Office
Brandywine Building
Wilmington, DE 19898
302-774-3403

EUROPE
Du Pont de Nemours
International S.A
P O Box
CH-1211
Geneva 24, Switzerland
022-3781111

ASIA-PACIFIC
Du Pont Far East Inc
Kowa Building No 2
11-39 Akasaka 1-chome
Minato-ku
Tokyo 107, Japan
585-5511

Du Pont Far East Inc
Maxwell Road
P O Box 3140
Singapore 9051
273-2244



EXHIBIT D

Specs.

1983

BULLETIN 55A

Ethylene Dichloride

Chemicals



INDUSTRIES

High-purity ethylene dichloride (EDC) is produced by PPG Industries' Chemicals Group at Lake Charles, Louisiana. PPG is one of the world's largest producers of ethylene dichloride and ships to customers in tank cars, tank trucks, barges and ocean-going ships. A terminal in Chicago, Illinois, also makes tank car and tank truck shipments.

USES

Almost three-quarters of the ethylene dichloride produced in the U.S. is used as an intermediate for making vinyl chloride. Other important intermediate uses for EDC include making 1,1,1-trichloroethane, trichlorethylene, perchlorethylene, ethylene amines and polysulfide elastomers.

Ethylene dichloride is also used as a scavenging agent in tetraethyllead fuel additive compounds to prevent lead salts and lead oxide from depositing on engine cylinder walls.

Ethylene dichloride is an excellent solvent for greases, oils, fats and waxes. Due to the toxicity and flammability of EDC, other chlorinated solvents have displaced it in many applications. However, EDC has certain advantages and is still used for various solvent applications in chemical processing.

GOVERNMENT SPECIFICATIONS

PPG technical-grade ethylene dichloride meets the chemical and physical requirements of Military Specification MIL-E-10662, Ethylene Chloride, Technical, including the requirement that 95% minimum distills between 82.5°C and 84.5°C at 760 mm Hg.

HEALTH HAZARDS

Ethylene dichloride can be taken into the body by ingestion, inhalation or skin absorption. By any of these means it can be highly toxic. Acute poisoning may cause headache, dizziness, feelings of drunkenness, loss of consciousness, internal bleeding and death. Repeated exposures can bring on nausea, vomit-

ing, stomach pain, irritated mucous membranes, loss of appetite, liver and kidney failure and possible death. Numerous cases of ethylene dichloride poisoning, both fatal and nonfatal, have been documented by the National Institute for Occupational Safety and Health.

TYPICAL PROPERTIES

Chemical Names: Ethylene dichloride; ethylene chloride; 1,2-dichloroethane.

Chemical Formula: $\text{CH}_2\text{ClCH}_2\text{Cl}$

Molecular Weight: 98.97

Description: Ethylene dichloride is clear and colorless, but darkens slowly upon exposure to sunlight. It has an odor like chloroform. The liquid is mobile, volatile and flammable, and its vapor is toxic and flammable.

Boiling Point, °C	83
°F	181
Freezing Point, °C	-35.9
°F	-32.6
Flash Point, Tag open cup, °C	18
°F	65
Explosive Limits, volume % in air	6.2 to 15.9
Autoignition Temperature, °C	413
°F	775
Viscosity at 25°C, cps	0.78
Density at 20°C, pounds/gallon	10.5
Refractive Index at 20°C, n_D	1.444
Vapor Pressure at 20°C, mm Hg	62.0
Vapor Density, air = 1	3.42
Solubility at 25°C, g EDC/100 g water	0.84
at 20°C, g water/100 g EDC	0.16

Solubility: Ethylene dichloride is soluble in most organic solvents.

Reactivity: At moderate temperatures, ethylene dichloride is stable and resistant to oxidation. When moisture-free at ordinary temperatures, it does not corrode metals. But in contact with water at elevated temperatures, ethylene dichloride will corrode iron and certain other common metals.

Specification and typical analysis:

	Specification	Typical Analysis
Purity, minimum %	99.7	99.99
Color, maximum APHA	10	8
Appearance	clear, free of suspended matter	clear, free of suspended matter
Acidity, as HCl, maximum ppm	10	<1
Alkalinity, as NaOH, maximum ppm	10	—
Water, maximum ppm	200	50
Free Chlorine	none	0
Nonvolatile Residue, maximum ppm	100	1
Total Chlorinated Hydrocarbons, low-boiling, maximum ppm	500	75
Total Chlorinated Hydrocarbons, high-boiling, maximum ppm	500	100
Total Oxygenated Compounds, maximum ppm	300	0
C ₂ and Higher Compounds, maximum ppm	300	10
Total Soluble Iron, maximum ppm	0.5	0.5
Specific Gravity, 60°/60°F	1.261-1.264	1.262

When ethylene dichloride is ingested, the predominant characteristic is blood disorder, including clotting problems. With skin absorption or inhalation, the first effects are headache, weakness, eye irritation and nausea. Ethylene dichloride has been found in human milk and in the exhaled breath of nursing mothers who were exposed to the chemical.

Ethylene dichloride in contact with eyes or skin can result in local pain and irritation. Dermatitis may result from removal of natural skin oils and moisture, although permanent eye or skin injury has not been known to occur. If EDC is held close to the skin, as by contaminated clothing, severe irritation and moderate edema and necrosis may result.

Chronic Exposure

There are reports of two mild cases of human exposure for periods of two to five months which showed symptoms of central nervous system depression and gastrointestinal upset with nausea and vomiting. These persons recovered when removed from exposure. The liver and kidneys may be damaged by prolonged or repeated inhalation of the vapor.

Recent animal studies conducted by the National Cancer Institute (NCI) have shown that ethylene dichloride can cause cancer in rats and mice by oral administration. However, in other studies of rats and mice exposed to EDC by inhalation, the results—although preliminary—did *not* confirm the NCI findings.

The National Institute for Occupational Safety and Health (NIOSH) has recommended that the current OSHA permissible exposure limit be reduced from 50 ppm to 5 ppm (8-hour TWA) with a ceiling of 15 ppm. Although no evidence now exists showing that ethylene dichloride can cause cancer in human beings, PPG strongly suggests that EDC users review their health programs and operations and institute operating and housekeeping practices designed to limit employee exposure as much below currently established exposure limits as practical.

HANDLING AND STORAGE

Ethylene dichloride is a flammable liquid. It introduces a fire hazard wherever it is handled, stored or used. At high temperatures, such as occur in open flames, it decomposes to give off toxic and corrosive gases. Mixed with air

Ordinary temperatures, ethylene dichloride is explosive within the limits of 6.2 to 15.9% by volume. Fire and explosion hazards can be minimized by adequate ventilation, the proper types and arrangement of equipment, and reasonable precautions and care in handling.

Information on the "Safe Handling and Use of Ethylene Dichloride" appears in Chemical Safety Data Sheet SD-18 published by the Manufacturing Chemists Association, 1825 Connecticut Avenue, N.W., Washington, D.C. 20009. The MCA also publishes Manual Sheet TC-4 on "Unloading Flammable Liquids from Tank Cars."

PACKAGING AND SHIPPING

PPG Industries delivers ethylene dichloride by tank car, barge, tank truck, drums and ship from the Lake Charles, Louisiana, plant. Tank car and tank truck shipments can also be made from a terminal in Chicago, Illinois.

Tank car capacities include 8,000, 10,000 and 20,000 gallons. Tank truck capacity is generally 4,000 gallons.

SAMPLES AND SERVICE

Samples of ethylene dichloride are available in various sizes to meet customer requirements.

The technical service staff of PPG Industries' Chemicals Group is available for consulting on handling, storage and use.



PPG INDUSTRIES, Inc.
Chemicals Group
One Gateway Center
Pittsburgh, PA 15222

Statements and methods presented are based upon the best available information and practices known to PPG Industries at present, but are not representations or warranties of performance, fitness or completeness. For do they imply any recommendations to infringe any patent or other intellectual property.

The products mentioned here can be hazardous if not used properly. Any health hazard and safety information contained herein should be passed on to your customers or employees, as the case may be. PPG Industries also recommends that, before use, anyone using or handling this product thoroughly read and understand the information and precautions on the label, as well as in other product safety publications such as the Material Safety Data Sheet.

Like all potentially hazardous materials, this product must be kept out of the reach of children.



MERICHEM COMPANY

PHONE. A/C 713-224-3030 • 4800 TEXAS COMMERCE TOWER
TELEX 775-178 • HOUSTON, TEXAS 77002-3068

PURCHASING

AUG 25 1986

RECEIVED

99% meta CRESOL

SPECIFICATIONS

Specific Gravity @ 15.5°C./15.5°C.	1.039 ± .004
Moisture, wt. %, Max.	0.10%
Neutral Oil, wt./vol. %, Max.	0.10%
Total Sulfur, wt. %, Max.	0.01%
Pyridine Bases, wt. %, Max.	0.05%
Pentanol, wt. %, Max.	0.10%
Color, Max.	Gardner 2
Composition:	
meta Cresol, wt. %, Min.	99.0%

TYPICAL COMPOSITION BY VAPOR CHROMATOGRAPHY

Phenol	Trace
ortho Cresol, wt. %	0.1%
2,6 Xylenol, wt. %	Trace
meta Cresol	99.2%
para Cresol	0.4%
Xylenol + Ethyl Phenol, wt. % ..	0.3%

EXHIBIT D

ADEQ0017705



NITRIC ACID - CONCENTRATED
PRODUCT SPECIFICATIONS
(Product Code 7000200)

General Description: A light yellow to reddish brown fuming liquid.

<u>CHARACTERISTICS</u>	<u>LIMITS</u>	<u>TYPICAL VALUES</u>
Assay (as HNO ₃)	98.0 min.	98.5%
Sulfate (as H ₂ SO ₄)	0.07% max.	0.06%
Chlorides (as HCl)	5 ppm max.	2 ppm
Oxides of Nitrogen* (as N ₂ O ₃)	0.15% max.	0.10%
Lead Salts	0.1% max.	0.05%
Ash	0.1% max.	0.01%
Nitrobodyes	None	None
Iron (as Fe)	15 ppm max.	9 ppm

*Product meets the 0.15% N₂O₃ specification at the time of shipping.
Due to normal buildup, it is likely to be much higher upon delivery during hot weather.

Rec'd 9/7/83

Table of Typical Analyses and Properties Sulfuric Acid

	60°	66°	95%	98-99%	20% Oleum	23% Oleum	30% Oleum	40% Oleum	65% Oleum
Plant	2, 4	1,2,3,4,	1, 2	1,2,3,4,	2	1, 2	1, 2	2	2
H ₂ SO ₄ , %	77.67	93.2	95.0	99.0	104.5	105.18	106.8	109.0	114.7
Sp. Gr. @ 60°F.	1.71	1.83	1.84	1.84	1.92	1.93	1.95	1.98	1.99
Weight, lbs./Gal.	14.2	15.3	15.3	15.4	15.98	16.0	16.28	16.53	16.61
Freeze Point, °F.	-12	-27	-10	+42	-23	-50	+66	+91	-36
Iron (As Shipped), PPM	100	40	40	40	40	40	40	.	25
SiO ₂ , PPM	5	4	4	4	.	.	.	.	.
Chlorides, PPM	1	<1	<1	<1	<1	<1	<1	<1	.
Non Volatile Metals, PPM	150	65	65	65	80	80	80	.	50
N ₂ O ₅ , PPM	2	2	2	2	2	2	2	.	.
Lead, PPM	<1	<1	<1	<1	<1	<1	<1	<1	<1
Color, APHA*	40	40	40	40	.	.	.	.	.

*Determined on a 1:1 dilution

-Indicates Not Determined

The above are typical analyses of Sulfuric Acid/Oleum manufactured by Cities Service Company. Plant designations are 1-Augusta, Georgia; 2-Copperhill, Tennessee; 3-Lake Charles, Louisiana; and 4-Monmouth Junction, New Jersey.

Other grades, and shipping points, are often available on special request. For additional information contact the Atlanta Sales Office.



TENNESSEE CHEMICAL COMPANY

3475 LENOX ROAD, N.E., SUITE 670 — ATLANTA, GEORGIA 30326

(404) 233-6811

RECEIVED

SEP 07 1983

Typical

February 28, 1984

Mr. Ron Cheves
Vice President of Business Development
VERTAC CHEMICAL CORPORATION
Suite 201
One Greentree Centre
Marlton, NJ 08053

RE: Secrecy Agreement between
Vertac Chemical Corporation
and Rhone-Poulenc Inc.

Dear Mr. Cheves:

To assist Vertac Chemical Corporation (hereinafter referred to as "Vertac") in its evaluation of the costs involved in nitrating the compound MC10879 to a product named "A" followed by caustic neutralization, Rhone-Poulenc Inc. is prepared to forward to Vertac certain proprietary information. The term "proprietary information" specifically includes the following technical information related to the aforementioned process: a simplified process flow diagram, operating conditions (pressure, temperature, reactants), waste streams and usage factors, and also includes data, knowhow, formulae, studies, processes, designs, specifications, samples, reports, findings, ideas, sketches, photographs and plans.

In order that we may have a clear understanding of the rights and obligations of our respective companies in connection with any and all proprietary information submitted by us to Vertac, we agree to forward you such proprietary information on the following terms and conditions:

1. Vertac agrees to keep confidential and not to disclose to others any and all information obtained from us at any and all times, and to use said information only for the purposes stated above. It further agrees that said disclosures and access to all such information shall be limited to those employees of Vertac who have need to know and who have been informed of and agree to be bound by the obligations of this paragraph. The obligations hereunder shall not apply to:
 - (a) information which at the time of disclosure is in the public domain;
 - (b) information which, after disclosure, becomes part of the public domain by publication or otherwise through parties other than the parties hereto except by breach of this Agreement by Vertac;

EXHIBIT E



ADEQ0017705

VERTAC CHEMICAL CORPORATION

2

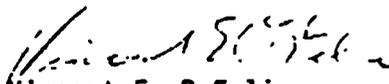
February 28, 1984

- (c) information which Vertac can document by competent proof was in its possession at the time of disclosure and was not acquired, directly or indirectly, from Rhone-Poulenc Inc.;
- (d) information which Vertac receives from third parties; provided, however, that such information was not obtained by said third party, directly or indirectly, from Rhone-Poulenc Inc.
2. Vertac agrees to keep said information confidential for a period beginning with the date of this Agreement and terminating December 31, 1991.
 3. No right, express or implied, is granted by this Agreement under any patent owned by Rhone-Poulenc Inc.
 4. All disputes arising in connection with this Agreement shall be settled by the American Arbitration Association in accordance with its rules and procedures.
 5. This Agreement shall bind and inure to the benefit of the successors and assigns of the entire business of the respective parties; and it will not be assigned by either party without the prior written consent of the other party.

We are sending this letter in duplicate. If the foregoing is satisfactory to you, please so indicate by signing and dating both copies in the spaces provided and return us the signed duplicate for our records.

Very truly yours,

RHONE-POULENC INC.


 Vincent E. DeFelice
 Senior Vice President
 General Counsel

Accepted and Agreed to:
 VERTAC CHEMICAL CORPORATION

By: Ron Chenev

Title: Vice President

Date: 3.12.84

VED:das

cc: J-P. Dal Pont
 T.M. Dille



EXHIBIT E

ADEQ0017705

cc J. Malone

LAW OFFICES
APPERSON, CRUMP, DUZANE & MAXWELL

26TH FLOOR
100 NORTH MAIN BUILDING
MEMPHIS, TENNESSEE 38103
901/525-1711

EAST OFFICE
SUITE 100
KIRBY CENTRE
1755 KIRBY PARKWAY
MEMPHIS, TENNESSEE 38119
901/756-6300

CHARLES W. METCALF 1940-1994
WILLIAM P. METCALF 1978-1990
JOHN W. APPERSON 1988-1995

CHARLES METCALF CRUMP
JERRE O. DUZANE
JOHN S. MAXWELL, JR.
ALLEN T. MALONE
PHILIP G. MAXINSKY
ROBERT L. DINKELSPIEL
MICHAEL E. HENGOLEY
JAMES F. RUSSELL
JOHN L. RYDER
COLBY S. MORGAN, JR.
MICHAEL S. CHAMPLIN
TONI L. CAMPBELL

SAMUEL RUBENSTEIN
GEORGE W. GRIDER
JOHN MART TODD
OF COUNSEL

August 13, 1986

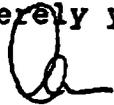
Mr. G. L. Pratt
Cedar Chemical Corporation
24th Floor, Clark Tower
5100 Poplar Avenue
Memphis, Tennessee 38137

Re: Cedar/Rhone-Poulenc Toll Manufacturing Agreement

Dear Geoff:

Enclosed for review by Ron and you is my first draft of the referenced agreement. As soon as I have your comments, I will make the necessary changes and submit the draft to Rhone-Poulenc's counsel for their review. Hopefully I will be able to do that by the end of this week.

Sincerely yours,



Allen T. Malone

ATM:jw

Enclosures

FIRST DRAFT
08/13/86

AGREEMENT

THIS AGREEMENT made as of the first day of August, 1986 by and between CEDAR CHEMICAL CORPORATION, a Delaware corporation with offices at Suite 2414, Clark Tower, 5100 Poplar Avenue, Memphis, Tennessee 38137 ("Cedar"), and RHONE-POULENC, INC., a Delaware corporation with offices at Black Horse Lane, Monmouth Junction, New Jersey 08852 ("Rhone-Poulenc").

W I T N E S S E T H:

WHEREAS, Rhone-Poulenc has developed and currently possesses processes involving a coupling reaction for the manufacture of a product known as RP-15, and involving Nitration/Neutralization Steps for the production of a product known as RP-10 (RP-15 and RP-10 being sometimes referred to herein as "Products"); and

WHEREAS, Cedar owns production facilities at West Helena, Arkansas, which, when modified in accordance with the provisions of this Agreement, are deemed by the parties to be capable of manufacturing RP-15 and RP-10 in accordance with the provisions hereof; and

WHEREAS, Rhone-Poulenc desires to retain Cedar to manufacture RP-15 and RP-10, and Cedar desires to perform said services, all in accordance with the terms and conditions of this Agreement;

NOW, THEREFORE, in consideration of the premises and the mutual covenants contained herein, the parties agree as follows:

1. Definitions

For purposes of this Agreement, the following terms shall have the following meanings assigned thereto:

1.1. "RP-15" shall mean product meeting those specifications attached hereto as Exhibit "A";

1.2. "RP-10" shall mean product meeting those specifications attached hereto as Exhibit "B";

1.3. "Plant" shall mean those portions of Cedar's manufacturing facility at West Helena, Arkansas, including equipment to be installed thereat, as described described in Exhibits "C" and "D".

2. Term

This Agreement shall commence as of the date first written above and shall terminate on June 1, 1989, unless terminated earlier in accordance with the provisions hereof, or unless extended by mutual agreement of the parties hereto.

3. Plant Modifications and Equipment

3.1. Cedar has heretofore undertaken to modify the Plant in accordance with plans and specifications which have been approved by Rhone-Poulenc attached hereto as Exhibit "C", so as to enable Cedar to initiate production of RP-15 on or about October 1, 1986. Beginning August 31, 1986 and on the last day

of each month thereafter until completion of such modifications, Cedar shall invoice Rhone-Poulenc for all direct expenses incurred in so modifying the Plant, provided that the total of such invoices shall not exceed \$75,000, except to the extent of any excess expenditures approved in writing by Rhone-Poulenc. Title to all equipment and facilities acquired in connection with such modifications shall be and remain in Cedar. Cedar shall make its best efforts to complete the modifications described in Exhibit "C" by September 30, 1986.

3.2. Beginning on or about October 15, 1986, subject to successful startup of the production of RP-15 at the Plant contemplated hereunder, Cedar shall initiate additional modification of the Plant in accordance with the plans and specifications to be approved by Rhone-Poulenc and attached hereto as Exhibit "D" so as to enable Cedar to produce RP-10 beginning not later than February 15, 1987. Cedar shall submit monthly invoices to Rhone-Poulenc for reimbursement of costs incurred in connection with said modifications pursuant to this Section 3.2 beginning the 31st day of October, 1986 and monthly thereafter provided that the aggregate of said invoices shall in no event exceed the sum of \$425,000 except to the extent of any excess expenditures approved in writing by Rhone-Poulenc. Cedar shall retain title to all equipment and other facilities acquired by it in connection with such modifications with the exception of one glass-lined

reactor which Rhone-Poulenc shall furnish at its cost and expense, title to which shall be and remain in Rhone-Poulenc. Upon termination of this Agreement, such reactor shall be removed from the Plant and delivered to Rhone-Poulenc at its sole cost and expense.

3.3 All invoices submitted by Cedar to Rhone-Poulenc for plant modifications pursuant to this Article 3 shall be due and payable by Rhone-Poulenc within ten days from the date of such invoices. Cedar shall make available to Rhone-Poulenc upon request reasonably detailed documentation supporting the costs and other expenditures covered by such invoices.

4. Production Quantities and Schedules

4.1. Beginning on or about October 15, 1986, Cedar shall start up the facilities at the Plant modified in accordance with Exhibit "C", and shall make its best efforts to manufacture in a continuous 90-day campaign up to 684,000 pounds of RP-15, utilizing Rhone-Poulenc's process identified in Exhibit "E" attached hereto, and using raw materials meeting the specifications required in accordance with said process, such raw materials to be supplied by Rhone-Poulenc at its sole cost and expense in sufficient quantities for Cedar to carry out the initial RP-15 production campaign, as well as any subsequent production campaigns hereunder. Vertac's total processing charge for undertaking the initial RP-15 campaign hereunder shall be the sum of \$435,000,

which sum shall be invoiced by Cedar to Rhone-Poulenc in three equal monthly installments, the first to coincide with start-up of facilities at the Plant at the beginning of the initial RP-15 campaign, and the remaining two invoices to be issued at the end of each thirty days thereafter. The total processing charge so invoiced shall cover any amount of production of RP-15 during the initial ninety-day campaign up to 684,000 pounds. Additional production of RP-15 during the ninety-day campaign shall be invoiced to Rhone-Poulenc at the rate of thirty-five cents (\$.35) per pound. In the event the initial RP-15 campaign is extended beyond the original ninety-day period, additional production time will be charged to Rhone-Poulenc at the rate \$175,000 per month, prorated for any period shorter than one month.

4.2. Beginning on or about January 15, 1987, but, subject to the conditions specified in Section 3.2 of this Agreement, not later than February 15, 1987, Cedar shall start up the facilities at the Plant modified in accordance with Exhibit "D", and shall make its best efforts to manufacture in a continuous ninety-day campaign up to 600,000 pounds of RP-10, utilizing Rhone-Poulenc's process identified in Exhibit "F" attached hereto, and using raw materials meeting the specifications required in accordance with said process, such raw materials to be supplied by Rhone-Poulenc at its sole cost and expense in sufficient quantities for Cedar to carry out the initial RP-10 pro-

duction campaign, as well as any subsequent production campaigns hereunder. Cedar's total processing charge for undertaking the initial RP-10 campaign hereunder shall be the sum of \$550,000, which sum shall be invoiced by Cedar to Rhone-Poulenc in three equal monthly installments, the first to coincide with the start up of facilities at the Plant at the beginning of the initial RP-10 campaign, and the remaining two invoices to be issued at the end of each thirty days thereafter. The total processing charge so invoiced shall cover any amount of production of RP-10 during the initial ninety-day campaign up to 600,000 pounds. Additional production of RP-10 during the ninety-day campaign shall be invoiced to Rhone-Poulenc at the rate of thirty-five (\$.35) cents per pound. In the event the initial RP-10 campaign is extended beyond the original ninety-day period, additional production time will be charged to Rhone-Poulenc at the rate of \$200,000 per month, prorated for any period shorter than one month.

4.3. Rhone-Poulenc believes that the Plant, when modified in accordance with Exhibits "C" and "D" respectively, will be capable of producing RP-15 (100% contained active ingredient) at a rate of 10,000 pounds per day, and RP-10 (100% contained active ingredient) at a rate of 9,000 pounds per day. In the course of process confirmation start-up periods for each of the Products described herein. Specifically, during each such

process confirmation start-up period, each to occur during at least seven consecutive days following initial start up, it is understood that the Plant shall demonstrate the ability to produce Products at the rates, yields, and meeting the specifications referred to or contemplated herein, or otherwise acceptable to Rhone-Poulenc. In the absence of such demonstration, Cedar shall have the right to terminate this Agreement upon notice to Rhone-Poulenc. Any raw material consumption or product yield standards to be undertaken by Cedar hereunder shall be established by good faith negotiation of the parties based on production results during such start-up periods.

4.4. Cedar shall maintain the Plant, including the equipment and other facilities described in Exhibits "C" and "D", for future production campaigns during the initial term of this Agreement; provided, however, that unless Rhone-Poulenc shall issue future purchase orders to Cedar not later than June 1, 1987 and annually thereafter for production of at least the same quantities of RP-15 and RP-10 projected for the initial campaign hereunder, in each case beginning within 120 days following such purchase order, Cedar shall have the right to terminate this Agreement upon written notice to Rhone-Poulenc. Processing charges for such additional campaigns following June 1, 1987 shall be \$175,000 for each thirty days for RP-15 and \$200,000 for

each thirty days for RP-10, in each case escalated in accordance with the formula attached hereto as Exhibit "G".

5. Method of Operation

5.1. Throughout all production campaigns under this Agreement, Rhone-Poulenc shall furnish Cedar, or cause it to be furnished, with raw materials in amounts sufficient to enable Cedar to produce the quantities of RP-15 and RP-10 required hereunder in a timely fashion so as to permit production of said Products in continuous campaigns of not less than ninety days each, such raw materials to be furnished in bulk, FOB the Plant.

5.2. Cedar shall provide at the Plant receiving, storage and delivery facilities and services necessary to fully perform its obligations hereunder. Cedar shall take reasonable steps to preserve and protect raw materials and Products produced therefrom contamination, theft, damage or destruction while in Cedar's possession.

5.3. Cedar will inspect all raw materials tendered by Rhone-Poulenc hereunder, and promptly shall advise Rhone-Poulenc's designated representative of any apparent defects in such raw materials. Rhone-Poulenc shall provide to Cedar a weight ticket and certificate of analysis for all raw materials to be delivered by it hereunder.

5.4. Cedar shall ship Products in accordance with Rhone-Poulenc's instructions and at Rhone-Poulenc's sole cost and expense.

6. Title And Risk Of Loss

6.1. Title to raw materials delivered by Rhone-Poulenc to Cedar and title to Products produced by Cedar therefrom shall at all times remain solely in Rhone-Poulenc. Raw materials and Products shall be segregated from other materials and goods of Cedar.

6.2. Subject to the terms of this Agreement, Cedar shall assume the risk of loss of or damage to raw materials from the time of delivery to it hereunder, and for loss of or damage to work in process and to Products produced hereunder until delivery to Rhone-Poulenc's carrier at the Plant, except to the extent that such loss or damage results from Rhone-Poulenc's negligence. In no event shall Cedar be liable to Rhone-Poulenc for indirect or consequential damages alleged as a result of any such loss or damage.

7. Waste Disposal

7.1 Cedar's responsibility for handling waste generated as a result of its performance hereunder shall be (a) to neutralize said waste in such manner as will permit off-site disposal of same, and (b) to assist Rhone-Poulenc in the selection of a

contractor to handle off-site treatment or disposal of such waste. The cost of all such off-site treatment or disposal of waste hereunder shall be borne directly by Rhone-Poulenc, and Rhone-Poulenc shall indemnify Cedar and save it harmless from and against all costs or damages, including reasonable attorneys' fees incurred by it which shall arise out of transportation, storage or treatment of such waste in any manner approved by Rhone-Poulenc hereunder.

7.2 Cedar shall make its best efforts to develop on-site disposal methods and processes to be carried out at the Plant. In the event Cedar is successful in developing any such on-site waste disposal process, it shall also be responsible for obtaining and maintaining all required Federal and State Permits, and the parties shall negotiate in good faith to establish a reasonable waste disposal fee for such on-site treatment and disposal of waste generated hereunder.

8. Access To Plant/Assistance

8.1. Cedar shall keep Rhone-Poulenc fully and currently informed with respect to its modification and production activities hereunder and shall afford reasonable access to Rhone-Poulenc personnel to observe such operations. Rhone-Poulenc shall hold Cedar harmless from and indemnify it against all claims and liability on account of personal injuries suffered by Rhone-Poulenc personnel while at the Plant.

8.2 During the course of Plant modifications and start-up periods referred to herein, Rhone-Roulenc shall provide Cedar with on-site personnel capable of assisting Cedar in said activities, and shall provide such other services as Cedar shall reasonably request in order to accomplish the goals of this Agreement.

9. Warranties

9.1. Cedar warrants that all Products produced by it hereunder following the process confirmation start-up periods for RP-15 and RP-10, respectively, shall conform to the specifications attached hereto as Exhibits "A" and "B" respectively, as same shall be revised either during the process confirmation start-up periods or thereafter by consent of the parties hereto. Cedar makes no other warranty with respect to the Products to be manufactured hereunder, whether of merchantability or fitness for a particular purpose, and none shall be implied.

9.2. Cedar warrants that all raw materials furnished by it hereunder shall conform to the specifications included in Exhibits "E" and "F" hereunder.

10. Indemnification

10.1. Cedar agrees to hold Rhone-Poulenc harmless from and to indemnify against all loss, costs, damages, liability and expense, including reasonable attorney's fees, on account of any personal injury or property damage arising out of Cedar's manufacture, handling and storage of raw materials and Products

hereunder during periods when such materials are in Cedar's possession and control, except to the extent that such occurrences are caused by the negligence of Rhone-Poulenc.

10.2. Rhone-Poulenc agrees to hold Cedar harmless from and to indemnify it against all loss, costs, damages, liability and expense, including reasonable attorney's fees on account of all personal injury or property damage arising out of occurrences relating to the handling, storage, transportation, sale or use of raw materials delivered to Cedar hereunder and RP-15 and RP-10 produced by Cedar hereunder when such materials are not in Cedar's possession and control, except to the extent that such occurrences are caused by the negligence of Cedar.

11. Force Majeure

11.1. No liability shall result from non-performance or delay in performance caused by circumstances beyond the reasonable control of the affected party; provided, however, that any party whose performance is prevented or impeded by such circumstances shall promptly provide written notice with reasonable particulars to the other party.

12. Notices

12.1. All notices required hereunder shall be deemed to be properly served as sent by first class mail, postage prepaid thereon or by telegram or overnight mail, and addressed to the party for whom intended at the following addresses:

If to Cedar:

If to Rhone-Poulenc:

13. Default

13.1. Anything elsewhere in this Agreement to the contrary notwithstanding, if either party breaches any of its obligations hereunder, becomes insolvent or commits an act of bankruptcy, or if a receiver is appointed for either party, then in any such event the other party may terminate this Agreement effective fifteen (15) days following written notice of termination by reason of such default, provided such default shall not have been cured by the effective date of such notice.

14. Independent Contractor

14.1. Cedar's performance hereunder is not deemed to create an agency between the parties hereunder, it being

understood that Cedar is acting solely as an independent contractor, and is solely responsible for the employment, control and conduct of its employees.

15. Secrecy Agreement

15.1. The Secrecy Agreement dated _____ between Cedar and Rhone-Poulenc attached hereto as Exhibit "H" is incorporated herein by reference.

16. General

16.1. The parties further agree as follows: (a) This Agreement shall be governed by the laws of the State of Arkansas; (b) No modification of this Agreement or waiver of any of its provisions shall be effective unless in writing and signed by the party to be bound thereby. Neither party's waiver of any breach of any of the provisions of this Agreement shall be deemed to be a waiver of any subsequent breach of the same nature or of any breach of a different nature; (c) This Agreement shall bind the successors and assigns of the parties hereto, but neither party may assign its rights or interests in this Agreement without the prior written consent of the other party, which consent shall not be unreasonably withheld; provided that Cedar may assign its rights in this Agreement to any purchaser of the Plant and Rhone-Poulenc may assign its rights in this Agreement to a purchaser of substantially all of its pesticide business. The section headings in this Agreement are inserted for con-

venience only and are not to be construed as part of the Agreement nor as a limitation on the scope of the particular sections to which they refer.

IN WITNESS WHEREOF, Cedar and Rhone-Poulenc have executed this Agreement as of the date and year first above appearing.

CEDAR CHEMICAL CORPORATION

By: _____

Title: _____

Date: _____

RHONE-POULENC, INC.

By: _____

Title: _____

Date: _____

CONTRACT

RHÔNE-POULENC INC.

P O Box 125 · Black Horse Lane · Monmouth Junction New Jersey 08852 Telephone (201) 297-0100 · Telex 844527

September 5, 1986

34 MONTHS
TOTAL

Mr. Ron Cheves
Vice President
Cedar Chemical Corporation
5100 Poplar Avenue
24th Floor
Memphis, Tennessee 38137

Dear Mr. Cheves:

The terms and conditions of this Letter Agreement in conjunction with the terms and conditions of the August 1, 1986 Letter Agreement, incorporated herein by reference and attached hereto as Exhibit "A", shall constitute the Agreement between Cedar Chemical Corporation, a Delaware corporation, with offices at Suite 2414, Clark Tower, 5100 Poplar Avenue, Memphis, Tennessee 38137, (hereinafter "Cedar") and Rhone-Poulenc Inc., a New York corporation, with offices at Black Horse Lane, Monmouth Junction, New Jersey (hereinafter "Rhone-Poulenc") concerning certain steps in the production of Tackle[®] intermediates which include production of two intermediates--1) by a coupling reaction and 2) the other by nitration and neutralization steps.

Definitions

For purposes of this Agreement, the following terms shall have the following meanings assigned thereto:

"RP-15" shall mean product meeting those specifications attached hereto as Exhibit "B"

"RP-10" shall mean product meeting those specifications attached hereto as Exhibit "C".

Term

This Agreement shall commence as of August 1, 1986 and shall terminate on June 1, 1989, unless terminated earlier in accordance with the provisions hereof, or unless extended by mutual agreement of the parties hereto.

Plant Modifications and Equipment

Cedar has heretofore undertaken to modify the plant in accordance with plans and specifications which have been approved by Rhone-Poulenc, so as to enable Cedar to initiate production of RP-15 on September 15, 1986.



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Beginning August 31, 1986 and on the last day of each month thereafter until completion of such modifications, Cedar shall invoice Rhone-Poulenc for all expenses incurred in so modifying the Plant, provided that the total of such invoices shall not exceed \$75,000. Title to all equipment and facilities acquired in connection with such modifications shall be and remain in Cedar. Cedar shall complete the modifications by September 15, 1986.

Beginning on August 31, 1986, Cedar shall initiate additional modification of the Plant in accordance with the plans and specifications to be approved by Rhone-Poulenc so as to enable Cedar to produce RP-10 as early as January 15, 1987 but no later than February 15, 1987. Cedar shall submit monthly invoices to Rhone-Poulenc for reimbursement of costs incurred in connection with said modifications beginning the 30th day of September, 1986 and monthly thereafter provided that the aggregate of said invoices shall in no event exceed the sum of \$425,000, except to the extent of any excess expenditures approved in writing by Rhone-Poulenc with respect to any changes in the scope of the work. Cedar shall retain title to all equipment and other facilities acquired by it in connection with such modifications, except for a glass-lined reactor which shall belong to Rhone-Poulenc Inc.

All invoices submitted by Cedar to Rhone-Poulenc for plant modifications shall be due and payable by Rhone-Poulenc within ten days from the date of such invoices. Cedar shall make available to Rhone-Poulenc upon request reasonably detailed documentation supporting the costs and other expenditures covered by such invoices, including any labor costs.

Method of Operation

Throughout all production campaigns under this Agreement, Rhone-Poulenc shall furnish Cedar, or cause it to be furnished, with raw materials in amounts sufficient to enable Cedar to produce the quantities of RP-15 and RP-10 required hereunder in a timely fashion so as to permit production of said Products in continuous campaigns of ninety days each, such raw materials to be furnished in bulk, FOB the Plant.

Cedar shall provide at the Plant receiving, storage and delivery facilities and services necessary to fully perform its obligations hereunder. Cedar shall take reasonable steps to preserve and protect raw materials and Products produced therefrom contamination, theft, damage or destruction while in Cedar's possession.

Cedar will inspect all raw materials tendered by Rhone-Poulenc hereunder, and promptly shall advise Rhone-Poulenc's designated representative of any apparent defects in such raw materials. Rhone-Poulenc shall provide to Cedar a weight ticket and certificate of analysis for all raw materials to be delivered by it hereunder.

Cedar shall ship Products in accordance with Rhone-Poulenc's instructions and at Rhone-Poulenc's sole cost and expense.

Title And Risk Of Loss

Title to raw materials delivered by Rhone-Poulenc to Cedar and title to Products produced by Cedar therefrom shall at all times remain solely in Rhone-Poulenc. Raw materials and Products shall be segregated from other materials and goods of Cedar.

Subject to the terms of this Agreement, Cedar shall assume the risk of loss of or damage to raw materials from the time of delivery to it hereunder, and for loss of or damage to work in process and to Products produced hereunder until delivery to Rhone-Poulenc's carrier at the Plant, except to the extent that such loss or damage results from Rhone-Poulenc's negligence. In no event shall Cedar be liable to Rhone-Poulenc for indirect or consequential damages alleged as a result of any such loss or damage.

Waste Disposal

Cedar's responsibility for handling waste generated as a result of its performance hereunder shall be (a) to neutralize said waste in such manner as will permit off-site disposal of same, and (b) to assist Rhone-Poulenc in the selection of a contractor to handle off-site treatment or disposal of such waste. The cost of all such off-site treatment or disposal of waste hereunder shall be borne directly by Rhone-Poulenc. Rhone-Poulenc shall indemnify Cedar and save it harmless from and against all costs or damages, including reasonable attorneys' fees incurred by it which shall arise out of transportation, storage or treatment of such waste in any manner approved by Rhone-Poulenc hereunder. However, such indemnification shall not apply to any costs or damages, including reasonable attorneys' fees incurred by Cedar which arise as a result of its negligence or its violation of any statute, ordinance or regulation.

Cedar shall make its best efforts to develop on-site disposal methods and processes to be carried out at the

Plant. In the event Cedar is successful in developing any such on-site waste disposal process, it shall also be responsible for obtaining and maintaining all required Federal and State Permits, and the parties shall negotiate in good faith to establish a reasonable waste disposal fee for such on-site treatment and disposal of waste generated hereunder.

Access To Plant/Assistance

Cedar shall keep Rhone-Poulenc fully and currently informed with respect to its modification and production activities hereunder and shall afford reasonable access to Rhone-Poulenc personnel to observe such operations. Rhone-Poulenc shall hold Cedar harmless from and indemnify it against all claims and liability on account of personal injuries suffered by Rhone-Poulenc personnel while at the Plant.

During the course of Plant modifications and start-up periods referred to herein, Rhone-Poulenc shall provide Cedar with on-site personnel capable of assisting Cedar in said activities, and shall provide such other services as Cedar shall reasonably request in order to accomplish the goals of this Agreement.

Warranties

Cedar warrants that all Products produced by it hereunder following the process confirmation start-up periods for RP-15 and RP-10, respectively, shall conform to the specifications attached hereto as Exhibits "B" and "C" respectively, as same shall be revised either during the process confirmation start-up periods or thereafter by consent of the parties hereto. Cedar makes no other warranty with respect to the Products to be manufactured hereunder, whether of merchantability or fitness for a particular purpose, and none shall be implied.

Cedar warrants that all raw materials furnished by it hereunder shall conform to the specifications included in Exhibits "D" hereunder.

Indemnification

Cedar agrees to hold Rhone-Poulenc harmless from and to indemnify against all loss, costs, damages, liability and expense, including reasonable attorney's fees, on account of any personal injury or property damage arising out of Cedar's manufacture, handling and storage of raw materials and Products hereunder during period when such materials are in Cedar's possession

and control, except to the extent that such occurrences are caused by the negligence of Rhone-Poulenc.

Rhone-Poulenc agrees to hold Cedar harmless from and to indemnify it against all loss, costs, damages, liability and expense, including reasonable attorney's fees on account of all personal injury or property damage arising out of occurrences relating to the handling, storage, transportation, sale or use of raw materials delivered to Cedar hereunder and RP-15 and RP-10 produced by Cedar hereunder when such materials are not in Cedar's possession and control, except to the extent that such occurrences are caused by the negligence of Cedar.

Payment of Processing Charges For RP-15 and RP-10

Cedar's total processing charge for undertaking the initial RP-15 campaign hereunder shall be the sum of \$435,000 which sum shall be invoiced by Cedar to Rhone-Poulenc in three equal monthly installments, the first to coincide with start-up of facilities at the Plant at the beginning of the initial RP-15 campaign, and the remaining two invoices to be issued at the end of each thirty days thereafter. The total processing charge so invoiced shall cover any amount of production of RP-15 during the initial ninety-day campaign up to 684,000 pounds. Additional production of RP-15 during the ninety-day campaign shall be invoiced to Rhone-Poulenc at the rate of thirty-five cents (\$.35) per pound. In the event the initial RP-15 campaign is extended beyond the original ninety-day period, additional production time will be charged to Rhone-Poulenc at the rate of \$175,000 per month, prorated for any period shorter than one month.

Cedar's total processing charge for undertaking the initial RP-10 campaign hereunder shall be the sum of \$550,000, which sum shall be invoiced by Cedar to Rhone-Poulenc in three equal monthly installments, the first to coincide with the start up of facilities at the Plant at the beginning of the initial RP-10 campaign, and the remaining two invoices to be issued at the end of each thirty days thereafter. The total processing charge so invoiced shall cover any amount of production of RP-10 during the initial ninety-day campaign up to 600,000 pounds. Additional production of RP-10 during the ninety-day campaign shall be invoiced to Rhone-Poulenc at the rate of thirty-five (\$.35) cents per pound. In the event the initial RP-10 campaign is extended beyond the original ninety-day period, additional production time will be charged to Rhone-Poulenc at the rate of \$200,000 per month, prorated for any period shorter than one month.

Cedar's Acknowledgement

Cedar acknowledges that it has received process information safety studies, Material Safety Data Sheets of all raw materials and waste streams and products from Rhone-Poulenc; and Cedar also acknowledges that it is a chemical manufacturer, knowledgeable in the safe handling of chemicals and qualified to perform the required manufacturing functions hereunder.

Usage Factors

During each process confirmation start-up period (each period to be for a maximum of seven consecutive days following initial start-up), it is understood that Cedar and Rhone-Poulenc shall agree upon usage factors for raw materials and waste by products.

Invention

Should any invention arise from an improved manufacturing process of RP-15 or RP-10 as a result of Rhone-Poulenc's or Cedar's efforts, such invention and any patent rights thereto should belong exclusively to Rhone-Poulenc Inc.

Failure To Issue Additional Purchase Orders

Cedar shall maintain the Plant, for future production campaigns during the initial term of this Agreement; provided, however, that Rhone-Poulenc shall issue future purchase orders to Cedar not later than June 1, 1987 and by June 1 of each successive calendar year during the term hereof for production of either RP-15 or RP-10, or both. In each case such campaigns shall be completed by May 31 of such contract year. If Rhone-Poulenc fails to issue such additional purchase orders, Cedar shall have the right to terminate this Agreement upon written notice to Rhone-Poulenc. Processing charges for such additional campaigns following June 1, 1987 shall be substantially identical to those applicable to the initial campaigns.

Force Majeure

No liability shall result from non-performance or delay in performance caused by circumstances beyond the reasonable control of the affected party; provided, however, that any party whose performance is prevented or impeded by such circumstances shall promptly provide written notice with reasonable particulars to the other party.

Notices

All notices required hereunder shall be deemed to be properly served as sent by first class mail, postage prepaid thereon or by telegram or overnight mail, and addressed to the party for whom intended at the following addresses:

If to Cedar:

Mr. G.L. Pratt
Cedar Chemical Corporation
24th Floor, Clark Tower
5100 Poplar Avenue
Memphis, Tennessee 38137

If to Rhone-Poulenc:

Mr. Jean-Pierre Dal Pont
Vice President of Technical Services
Rhone-Poulenc, Inc.
P.O. Box 125
Black Horse Lane
Monmouth Junction, New Jersey 08852

Default

Anything elsewhere in this Agreement to the contrary notwithstanding, if either party breaches any of its obligations hereunder, becomes insolvent or commits an act of bankruptcy, or if a receiver is appointed for either party, then in any such event the other party may terminate this Agreement effective fifteen (15) days following written notice of termination by reason of such default, provided such default shall not have been cured by the effective date of such notice.

Independent Contractor

Cedar's performance hereunder is not deemed to create an agency between the parties hereunder, it being understood that Cedar is acting solely as an independent contractor, and is solely responsible for the employment, control and conduct of its employees.

Secrecy Agreement

The Secrecy Agreement dated March 12, 1984 between Cedar and Rhone-Poulenc attached hereto as Exhibit "E" is incorporated herein by reference.

General Provisions

The parties further agree as follows: (a) This Agreement shall be governed by the laws of the State of Arkansas; (b) No modification of this Agreement or waiver of any of its provisions shall be effective unless in writing and signed by the party to be bound thereby. Neither party's waiver of any breach of any of the provisions of this Agreement shall be deemed to be a waiver of any subsequent breach of the same nature or of any breach of a different nature; (c) This Agreement shall bind the successors and assigns of the parties hereto, but neither party may assign its rights or interests in this Agreement without the prior written consent of the other party, which consent shall not be unreasonably withheld; provided that Cedar may assign its rights in this Agreement to any purchaser of the Plant and Rhone-Poulenc may assign its rights in this Agreement to a purchaser of substantially all of its pesticide business; (d) If the terms of any purchase orders or invoices are contrary to the terms and conditions of this Agreement, the terms and conditions of such purchase orders or invoices are superseded by the terms and conditions of this Agreement. The section headings in this Agreement are inserted for convenience only and are not to be construed as part of the Agreement nor as a limitation on the scope of the particular sections to which they refer.

Please indicate your agreement with these terms and conditions by signing and dating the original and two (2) copies of this Letter Agreement returning the original and a copy to me.

ACCEPTED AND AGREED TO:

CEDAR CHEMICAL CORPORATION

By: Ron Cheves

Ron Cheves
Vice President

Very truly yours,

RHONE-POULENC INC.

By: Jean-Pierre Dal Pont

Jean-Pierre Dal Pont
Vice President of
Technical Services

Date: 9.5.86

Tackle® is a registered trademark of Rhone-Poulenc Inc.

RHÔNE-POULENC INC.

P.O. Box 125 - Black Horse Lane - Monmouth Junction - New Jersey 08852 - Telephone - 201-297-0100 - Telex 844527

August 1, 1986

Mr. Ron Cheves
Vice President
Cedar Chemical Corporation
5100 Poplar
24th Floor
Memphis, Tennessee 38137

Dear Mr. Cheves:

Rhone-Poulenc Inc. proposes to enter into a contract with Cedar Chemical Corporation (hereinafter "Cedar") concerning certain steps in the production of Tackle[®], intermediates, which include production of two intermediates: 1) by a coupling reaction and 2) the other by nitration and neutralization steps. This Letter Agreement sets forth the following key terms and conditions agreed upon by the parties:

Coupling Reaction - RP-15

Cedar will modify an existing production facility for a maximum charge of \$75,000 to produce a minimum of 684,000 pounds of RP-15 at a nominal rate of 10,000 pounds per day (100% basis). The maximum charge of \$75,000 will be invoiced monthly and payment shall be made within 10 days of the date of the invoice. The amount of such invoices shall be equal to the expenditures actually incurred by Cedar for modification and installation charges related to Cedar's existing equipment. In order to verify Cedar's expenditures, Cedar shall make said invoices available to Rhone-Poulenc Inc. upon request.

The production rate will be guaranteed by Cedar, following a 7 day process confirmation start-up period, to be attended by Rhone-Poulenc personnel.

Production of 684,000 pounds is projected to be complete in 76 days. Additional production beyond 684,000 pounds, if desired, will be continued for 14 days and will be charged at the rate of \$.35 per pound of RP-15 (100% basis).

Production will commence on October 1, 1986, following a 6 week period required for plant preparation.

EXHIBIT A



ADEQ0017536

Total processing charges for 90 days of production will be \$435,000, to be paid in three equal payments during the 90 day campaign. Additional production during the 90 day period will be charged at the rate of \$.35 per pound. Production time requested, beyond the 90 day period, will be charged for at the rate of \$175,000 per month - pro rata per day.

Nitration - Neutralization - RP-10

Cedar will modify an existing production facility for a maximum charge of \$425,000 to produce a minimum of 600,000 pounds of RP-10 at a nominal rate of 9,000 pounds per day (100% active basis). The maximum charge of \$425,000 will be invoiced monthly and payment shall be made within 10 days of the date of the invoice. The amount of such invoices shall be equal to the expenditures actually incurred by Cedar for the purchase of equipment. Such equipment shall belong to Cedar except for a glass-lined reactor which shall belong to Rhone-Poulenc Inc. In order to verify Cedar's expenditures, Cedar shall make said invoices available to Rhone-Poulenc Inc. upon request.

The production rate will be guaranteed by Cedar following a 7 day process confirmation start-up period, to be attended by Rhone-Poulenc personnel.

Production of 600,000 pounds is projected to be complete in 73 days. Additional production beyond 600,000 pounds, if desired, will be continued for 17 days and will be charged at the rate of \$.35 per pound.

Production will commence as early as January 15, 1987 but no later than February 15, 1987, following a 10-12 week period required for plant preparation. Rhone-Poulenc Inc. shall provide Cedar with 30 days advance written notice of the actual commencement of production.

Total processing charges for 90 days of production will be a minimum of \$550,000, to be paid in three equal payments during the campaign. Additional production, during the 90 day period, will be charged for at the rate of \$.35 per pound of RP-10 (100% basis). Production time requested beyond the 90 day period will be charged for at the rate of \$200,000 per month - pro rata per day.

General Provisions

Cedar will secure necessary permits required to begin and continue production. Rhone-Poulenc Inc shall provide any necessary information or assistance in the procurement of said permits; and the status of said permits will be reviewed every 30 days by Cedar's and Rhone-Poulenc Inc.'s appropriate personnel. Cedar shall also advise Rhone-Poulenc Inc. in writing as to the need of any permit. If a 30 or more day delay occurs in processing any permit or if Cedar fails to procure a necessary permit, Rhone-Poulenc Inc. shall have the right to terminate this Agreement upon written notice to Cedar. However, Rhone-Poulenc Inc shall forfeit any monies paid prior to the date of termination.

Wastes will be processed by Cedar, if necessary, and sent off site for disposal with Rhone-Poulenc being charged the actual commercial rate. The costs of such waste processing is included in the over-all processing charge. Cedar shall provide Rhone-Poulenc Inc. with a detailed statement concerning its methods of waste disposal and shall verify that such methods comply with existing Federal and State environmental laws. Prior to the disposition of any wastes, the parties shall mutually agree upon the waste disposal site. In the event Cedar can process wastes through the biological system at West Helena, Cedar will share the savings with Rhone-Poulenc Inc.

Production facilities prepared for this project will be maintained by Cedar and will be made available to Rhone-Poulenc for additional production campaigns during a three year period. Prices will be approximately the same as provided in the first campaign with appropriate escalatorsto be provided in a subsequent Contract between the parties. Cedar will require advance notice of intent by June 1, 1987 to produce and volumes required. At the time of notification, Rhone-Poulenc Inc. shall advise Cedar whether to proceed only with the coupling step or also with the nitration and neutralization steps.

Cedar will be responsible for raw material consumption following the start-up process confirmation period. However, Cedar shall pay for the loss of any raw materials as a result of its negligence or the failure of equipment. In the event material is not in accordance with specifications, Cedar shall make a good faith effort to reprocess the material in order to comply with specifications.

Rhone-Poulenc will provide containers for shipment of product FOB West Helena, Arkansas.

EXHIBIT A

Rhone-Poulenc will provide all raw materials and bear the cost of all waste disposal.

Notwithstanding this Letter Agreement, it is also understood that all of the terms and conditions contained herein will be incorporated into a formal Contract which will be executed no later than August 29, 1986. The Contract will also make provision for additional terms and conditions covering such items as: indemnities, warranties, insurance etc.

Please indicate your agreement with these terms and conditions by signing and dating the original and two copies of this Letter Agreement returning the original and a copy to me.

Very truly yours,

RHONE-POULENC INC.

BY: Jean Pierre Dal Poht
Jean-Pierre Dal Poht
Vice President of
Technical Services

ACCEPTED AND AGREED TO:

CEDAR CHEMICAL CORPORATION

BY: Ron Cheves
Ron Cheves
Vice President

DATE: 8.1.86

Tackle^(a) is a registered trademark of Rhone-Poulenc Inc.

EXHIBIT A

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orig to Neil

RHÔNE-POULENC INC.

P O Box 125 - Black Horse Lane - Morrmouth Junction, New Jersey 08852 - Telephone (201) 297-0100 - Telex 844527

May 18, 1987

Cedar Chemical
Highway 242 South
West Helena, Arkansas 72390

Gentlemen:

At the end of May, we have scheduled a physical inventory of all products stored at all outside locations.

Therefore, we respectfully request that you complete the form enclosed showing all Rhone-Poulenc owned material in your possession as of the close of business May 31, 1987. If you discover any damaged inventory please make a note of it on the form.

Several of our outside storage facilities will be selected for an internal audit. If your location is selected, the person conducting the audit will contact you.

Please direct your response and any questions to Mr. Robert Dunn (201-821-2091) or Mr. George Ruskai (201-821-2092) at the address above. A self-addressed, stamped envelope is enclosed for your convenience.

Your prompt and full cooperation will be greatly appreciated.

Very truly yours,

Bruce A. Phillips
Corporate Controller

BAP/alw
Enclosure



ADEQ0017385

Tackla Shipments from Cedar Chemical Company
 Analysis by Cedar Chemical Company Normalized to AI of 21.1 % wt/wt

Tcedar.wt1, p 2

11-May 08:29

Lot No.	RP-10	RP-2	RP-4	RP-5	RP-7	RP-8	RP-9	RP-14	RP-21/31	RP-28	RP-29	RP-20/30	RP-32	RP-33	Unknown	EDC	NaOAc	FB-10	Purity %
ST017001	21.1	0.22	0.001	0.005	1.16	0.016	2.47	0.057	0.000	0.000	0.011	0.000	0.022	0.006	0.000	0.007	1.90	0.17	84.2
ST027002	21.1	0.29	0.001	0.004	1.17	0.019	2.40	0.046	0.001	0.000	0.012	0.000	0.023	0.003	0.000	0.008	1.67	0.17	84.2
ST027003	21.1	0.32	0.003	0.004	1.14	0.018	2.46	0.047	0.000	0.000	0.016	0.000	0.026	0.007	0.000	0.007	1.60	0.17	83.9
ST027004	21.1	0.30	0.000	0.000	1.16	0.013	2.49	0.034	0.000	0.020	0.027	0.000	0.034	0.007	0.000	0.010	1.62	0.17	83.7
ST027005	21.1	0.38	0.001	0.000	1.16	0.012	2.60	0.026	0.000	0.000	0.000	0.000	0.038	0.002	0.000	0.007	2.49	0.17	83.7
ST027006	21.1	0.31	0.002	0.000	1.24	0.021	2.47	0.025	0.000	0.000	0.023	0.000	0.039	0.023	0.000	0.003	1.76	0.18	83.6
ST027007	21.1	0.32	0.002	0.000	1.20	0.016	2.49	0.024	0.000	0.000	0.016	0.000	0.032	0.006	0.000	0.008	2.41	0.16	83.7
ST027008	21.1	0.45	0.002	0.000	1.19	0.018	2.46	0.020	0.000	0.000	0.012	0.000	0.026	0.004	0.000	0.007	1.40	0.17	83.9
ST027009	21.1	0.43	0.002	0.000	1.14	0.020	2.46	0.023	0.000	0.000	0.011	0.000	0.029	0.004	0.000	0.008	1.38	0.16	83.6
ST027010	21.1	0.41	0.002	0.000	1.16	0.020	2.47	0.018	0.000	0.000	0.012	0.000	0.026	0.004	0.000	0.007	1.76	0.16	83.7
ST027011	21.1	0.40	0.002	0.000	1.16	0.020	2.44	0.016	0.000	0.000	0.014	0.000	0.027	0.005	0.000	0.005	1.34	0.17	83.8
ST027012	21.1	0.16	0.002	0.000	1.19	0.024	2.60	0.016	0.000	0.000	0.016	0.000	0.028	0.008	0.000	0.012	1.34	0.16	84.3
ST037013	21.1	0.19	0.002	0.000	1.19	0.024	2.53	0.016	0.000	0.000	0.016	0.000	0.031	0.016	0.000	0.009	1.23	0.16	84.0
ST037014	21.1	0.14	0.005	0.000	1.16	0.030	2.43	0.020	0.000	0.000	0.022	0.000	0.031	0.007	0.000	0.009	1.37	0.16	84.5
ST037015	21.1	0.11	0.009	0.000	1.14	0.035	2.46	0.013	0.000	0.000	0.018	0.000	0.031	0.003	0.000	0.007	1.30	0.16	84.7
ST037016	21.1	0.16	0.008	0.000	1.17	0.037	2.44	0.016	0.000	0.000	0.023	0.000	0.030	0.006	0.000	0.005	1.36	0.17	84.4
ST037017	21.1	0.13	0.005	0.000	1.16	0.041	2.42	0.015	0.000	0.000	0.019	0.000	0.027	0.004	0.000	0.004	1.11	0.17	84.6
ST037018	21.1	0.12	0.008	0.000	1.16	0.048	2.48	0.016	0.000	0.000	0.016	0.000	0.026	0.044	0.000	0.008	1.36	0.17	84.4
ST037019	21.1	0.11	0.008	0.002	1.19	0.032	2.48	0.020	0.000	0.002	0.029	0.000	0.037	0.019	0.000	0.005	1.65	0.16	84.3
ST037020	21.1	0.13	0.008	0.000	1.16	0.057	2.40	0.025	0.000	0.000	0.017	0.000	0.033	0.004	0.000	0.006	1.54	0.17	84.6
ST037021	21.1	0.31	0.009	0.000	1.16	0.061	2.45	0.017	0.000	0.000	0.026	0.000	0.026	0.005	0.000	0.006	1.60	0.17	83.8
ST037022	21.1	0.37	0.009	0.000	1.13	0.058	2.46	0.014	0.000	0.000	0.022	0.000	0.026	0.003	0.000	0.003	1.60	0.17	83.6
ST037023	21.1	0.21	0.007	0.000	1.18	0.055	2.43	0.017	0.000	0.000	0.014	0.000	0.021	0.003	0.000	0.003	1.48	0.17	84.3
ST037024	21.1	0.16	0.007	0.004	1.23	0.064	2.47	0.016	0.002	0.002	0.018	0.000	0.026	0.006	0.000	0.003	1.83	0.17	83.9
ST037025	21.1	0.33	0.010	0.006	1.21	0.056	2.59	0.021	0.000	0.002	0.018	0.000	0.037	0.006	0.000	0.002	1.60	0.17	83.0
ST037026	21.1	0.21	0.009	0.006	1.26	0.083	2.42	0.016	0.000	0.002	0.017	0.000	0.037	0.006	0.000	0.001	1.68	0.17	83.9
ST037027	21.1	0.17	0.004	0.006	1.16	0.092	2.46	0.017	0.000	0.000	0.014	0.000	0.026	0.006	0.000	0.004	1.50	0.17	84.2
ST037028	21.1	0.17	0.008	0.005	1.19	0.051	2.37	0.017	0.000	0.000	0.014	0.000	0.025	0.006	0.000	0.003	1.36	0.17	84.6
ST037029	21.1	0.19	0.017	0.008	1.08	0.083	2.39	0.025	0.000	0.000	0.017	0.000	0.017	0.005	0.000	0.002	1.32	0.17	84.6
ST037030	21.1	0.16	0.008	0.008	1.23	0.089	2.54	0.017	0.000	0.000	0.017	0.000	0.026	0.003	0.000	0.003	1.43	0.17	83.7
ST047031	21.1	0.15	0.016	0.016	1.22	0.116	2.39	0.020	0.000	0.006	0.016	0.000	0.026	0.004	0.000	0.010	1.39	0.17	84.1
ST047032	21.1	0.21	0.014	0.016	1.19	0.120	2.47	0.008	0.000	0.003	0.016	0.000	0.026	0.003	0.000	0.003	1.05	0.17	83.8
ST047033	21.1	0.16	0.010	0.010	1.18	0.087	2.39	0.016	0.000	0.003	0.015	0.000	0.026	0.004	0.000	0.003	1.29	0.17	84.5
ST047034	21.1	0.18	0.008	0.010	1.15	0.080	2.43	0.007	0.000	0.003	0.014	0.000	0.025	0.006	0.000	0.003	1.47	0.17	84.3
ST047035	21.1	0.34	0.008	0.008	1.20	0.074	2.47	0.025	0.000	0.000	0.016	0.000	0.033	0.008	0.000	0.008	1.06	0.16	83.5
ST047036	21.1	0.24	0.000	0.004	1.16	0.070	2.52	0.035	0.013	0.000	0.009	0.000	0.018	0.004	0.000	0.001	1.00	0.16	83.6
ST047037	21.1	0.22	0.005	0.000	0.97	0.060	2.50	0.026	0.000	0.000	0.010	0.000	0.017	0.003	0.000	0.002	1.23	0.17	84.7
ST047038	21.1	0.27	0.006	0.005	1.18	0.061	2.42	0.022	0.000	0.000	0.009	0.000	0.016	0.003	0.000	0.001	1.12	0.17	84.1
ST047039	21.1	0.23	0.000	0.000	1.16	0.050	2.08	0.008	0.000	0.000	0.008	0.000	0.017	0.003	0.000	0.003	1.02	0.17	85.6
ST047040	21.1	0.42	0.008	0.009	1.21	0.076	2.43	0.017	0.000	0.000	0.014	0.000	0.017	0.004	0.000	0.002	1.18	0.17	83.4
ST047041	21.1	0.21	0.007	0.007	1.18	0.069	2.39	0.009	0.000	0.000	0.013	0.000	0.020	0.002	0.000	0.007	1.03	0.17	84.5
ST057042	21.1	0.24	0.007	0.009	1.09	0.069	2.38	0.013	0.000	0.000	0.016	0.000	0.029	0.003	0.000	0.001	1.29	0.17	84.6
ST057043	21.1	0.24	0.006	0.005	1.25	0.068	2.42	0.015	0.000	0.000	0.012	0.000	0.021	0.004	0.000	0.004	0.92	0.17	84.0
ST057044	21.1	0.19	0.005	0.008	1.19	0.059	2.46	0.018	0.000	0.000	0.012	0.000	0.028	0.006	0.000	0.005	1.18	0.17	84.2
Mean	21.1	0.24	0.006	0.004	1.17	0.093	2.44	0.020	0.000	0.001	0.016	0.000	0.027	0.007	0.000	0.005	1.44	0.17	84.1
Std Dev		0.10	0.004	0.004	0.05	0.028	0.07	0.010	0.002	0.003	0.005	0.000	0.006	0.007	0.000	0.003	0.33	0.00	0.5
Rel Dev		39	70	116	4	54	3	49	860	323	33	0	22	107	0	54	23	3	1
Mfg Spec	21.1	1.10	0.07	0.07	1.30	0.70	3.40	0.10	0.07	0.07	0.10	0.07	0.10	0.10	<0.07	0.010	2.00	0.3	

cc: M. Royer R. Theissen G. Vorn

Tackle Shipments from Cedar Chemical Company
 Analysis by Cedar Chemical Company

Tecedar.wal 11-May 08:18

Lot No.	RP-10	RP-2	RP-4	RP-5	RP-7	RP-8	RP-9	RP-14	RP-21/31	RP-28	RP-29	RP-20/30	RP-32	RP-33	Unknown	EDC	NeOAc	FG-10	Color	pH	Purity
% w/w	% w/w	% w/w	% w/w	% w/w	% w/w	% w/w	% w/w	% w/w	% w/w	% w/w	% w/w	% w/w	% w/w	% w/w	% w/w	% w/w	% w/w	% w/w	Gardner		%
ST017001	31.30	0.33	0.002	0.008	1.71	0.024	3.67	0.085	0.000	0.000	0.017	0.000	0.032	0.009	0.000	0.011	2.82	0.25	14	7.02	84.2
ST027002	31.50	0.43	0.002	0.006	1.75	0.028	3.58	0.069	0.001	0.000	0.018	0.000	0.035	0.005	0.000	0.012	2.50	0.29	10	7.03	84.2
ST027003	31.70	0.49	0.004	0.006	1.72	0.027	3.70	0.070	0.000	0.000	0.027	0.000	0.029	0.010	0.000	0.010	2.71	0.25	10	7.10	83.9
ST027004	31.30	0.45	0.000	0.000	1.75	0.020	3.70	0.050	0.000	0.030	0.040	0.000	0.050	0.010	0.000	0.015	2.70	0.25	10	7.28	83.7
ST027005	29.33	0.53	0.002	0.000	1.61	0.017	3.47	0.036	0.000	0.000	0.000	0.000	0.050	0.003	0.000	0.010	3.40	0.23	10	7.07	83.7
ST027006	27.30	0.40	0.002	0.000	1.60	0.027	3.20	0.032	0.000	0.000	0.030	0.000	0.050	0.030	0.000	0.004	2.28	0.23	10	7.36	83.6
ST027007	26.30	0.40	0.002	0.000	1.50	0.020	3.10	0.030	0.000	0.000	0.020	0.000	0.040	0.007	0.000	0.010	3.00	0.20	10	7.40	83.7
ST027008	25.56	0.54	0.003	0.000	1.44	0.022	2.98	0.024	0.000	0.000	0.014	0.000	0.031	0.005	0.000	0.009	1.69	0.20	10	7.60	83.5
ST027009	25.80	0.53	0.002	0.000	1.40	0.024	3.01	0.028	0.000	0.000	0.013	0.000	0.036	0.005	0.000	0.010	1.69	0.20	10	7.54	83.6
ST027010	25.60	0.50	0.002	0.000	1.41	0.024	3.00	0.018	0.000	0.000	0.015	0.000	0.031	0.005	0.000	0.008	2.14	0.20	10	7.71	83.7
ST027011	25.40	0.48	0.002	0.000	1.40	0.024	2.94	0.019	0.000	0.000	0.017	0.000	0.032	0.006	0.000	0.006	1.61	0.20	10	7.72	83.8
ST027012	26.15	0.20	0.002	0.000	1.47	0.020	3.10	0.020	0.000	0.000	0.020	0.000	0.035	0.010	0.000	0.015	1.66	0.20	10	7.56	84.3
ST037013	26.90	0.24	0.003	0.000	1.52	0.030	3.23	0.020	0.000	0.000	0.020	0.000	0.040	0.020	0.000	0.011	1.57	0.20	10	7.56	84.0
ST037014	25.65	0.17	0.006	0.000	1.44	0.036	2.95	0.024	0.000	0.000	0.027	0.000	0.038	0.008	0.000	0.011	1.67	0.20	10	7.40	84.5
ST037015	25.60	0.14	0.006	0.000	1.38	0.043	2.98	0.016	0.000	0.000	0.018	0.000	0.038	0.004	0.000	0.009	1.58	0.20	10	7.60	84.7
ST037016	24.60	0.19	0.007	0.000	1.36	0.043	2.85	0.019	0.000	0.000	0.027	0.000	0.035	0.007	0.000	0.006	1.59	0.20	10	7.50	84.4
ST037017	25.20	0.15	0.006	0.000	1.41	0.049	2.89	0.018	0.000	0.000	0.023	0.000	0.032	0.005	0.000	0.005	1.33	0.20	10	7.50	84.6
ST037018	24.70	0.14	0.009	0.000	1.36	0.056	2.90	0.018	0.000	0.000	0.019	0.000	0.031	0.002	0.000	0.009	1.59	0.20	10	7.75	84.4
ST037019	25.90	0.13	0.007	0.003	1.46	0.064	3.04	0.024	0.000	0.002	0.035	0.000	0.045	0.023	0.000	0.006	2.03	0.20	10	7.40	84.3
ST037020	25.20	0.16	0.009	0.000	1.38	0.080	2.87	0.030	0.000	0.000	0.020	0.000	0.040	0.005	0.000	0.007	1.84	0.20	10	7.39	84.6
ST037021	24.30	0.36	0.010	0.000	1.35	0.070	2.82	0.020	0.000	0.000	0.030	0.000	0.030	0.006	0.000	0.007	1.84	0.20	10	7.54	83.8
ST037022	24.20	0.43	0.010	0.000	1.30	0.067	2.81	0.016	0.000	0.000	0.025	0.000	0.032	0.004	0.000	0.003	1.84	0.20	10	7.40	83.8
ST037023	24.40	0.24	0.008	0.000	1.35	0.064	2.81	0.020	0.000	0.000	0.016	0.000	0.024	0.003	0.000	0.003	1.68	0.20	10	7.30	84.3
ST037024	25.46	0.22	0.009	0.005	1.49	0.077	2.98	0.019	0.002	0.003	0.022	0.000	0.034	0.006	0.000	0.004	2.21	0.20	10	7.51	83.9
ST037025	24.20	0.38	0.012	0.007	1.39	0.110	2.97	0.024	0.000	0.002	0.021	0.000	0.043	0.007	0.000	0.002	1.84	0.20	10	7.42	83.0
ST037026	24.70	0.25	0.010	0.007	1.47	0.074	2.83	0.019	0.000	0.002	0.020	0.000	0.043	0.007	0.000	0.001	1.82	0.20	10	7.58	83.9
ST037027	25.20	0.21	0.005	0.007	1.39	0.110	2.94	0.020	0.000	0.000	0.017	0.000	0.030	0.009	0.000	0.005	1.79	0.20	10	7.85	84.2
ST037028	24.90	0.20	0.009	0.006	1.40	0.060	2.80	0.020	0.000	0.000	0.017	0.000	0.029	0.007	0.000	0.004	1.60	0.20	10	7.80	84.6
ST037029	25.50	0.23	0.020	0.010	1.31	0.100	2.88	0.030	0.000	0.000	0.020	0.000	0.020	0.006	0.000	0.003	1.60	0.20	10	7.70	84.6
ST037030	24.90	0.19	0.010	0.010	1.45	0.100	3.00	0.020	0.000	0.000	0.020	0.000	0.030	0.004	0.000	0.003	1.69	0.20	10	7.70	83.7
ST047031	24.30	0.17	0.019	0.018	1.41	0.134	2.75	0.023	0.000	0.006	0.019	0.000	0.032	0.005	0.000	0.011	1.56	0.20	10	8.00	84.1
ST047032	24.30	0.24	0.016	0.018	1.37	0.138	2.85	0.009	0.000	0.004	0.018	0.000	0.029	0.004	0.000	0.004	1.21	0.20	10	7.83	83.8
ST047033	24.20	0.18	0.011	0.012	1.32	0.100	2.74	0.017	0.000	0.003	0.017	0.000	0.032	0.005	0.000	0.004	1.48	0.20	10	7.60	84.5
ST047034	24.90	0.21	0.010	0.012	1.35	0.094	2.87	0.008	0.000	0.003	0.017	0.000	0.030	0.007	0.000	0.004	1.74	0.20	10	7.65	84.3
ST047035	25.60	0.41	0.010	0.010	1.45	0.090	3.00	0.030	0.000	0.000	0.020	0.000	0.040	0.010	0.000	0.010	1.29	0.20	10	7.54	83.5
ST047036	24.04	0.27	0.000	0.004	1.32	0.080	2.87	0.040	0.015	0.000	0.010	0.000	0.020	0.004	0.000	0.002	1.14	0.20	10	8.29	83.8
ST047037	24.80	0.26	0.006	0.000	1.14	0.070	2.94	0.030	0.000	0.000	0.012	0.000	0.020	0.004	0.000	0.002	1.45	0.20	10	7.77	84.7
ST047038	24.40	0.31	0.007	0.006	1.36	0.070	2.80	0.026	0.000	0.000	0.010	0.000	0.018	0.004	0.000	0.001	1.30	0.20	10	7.55	84.1
ST047039	25.10	0.27	0.000	0.000	1.38	0.060	2.48	0.010	0.000	0.000	0.010	0.000	0.020	0.003	0.000	0.004	1.21	0.20	10	7.60	85.6
ST047040	25.00	0.50	0.009	0.011	1.43	0.090	2.88	0.020	0.000	0.000	0.017	0.000	0.020	0.005	0.000	0.002	1.40	0.20	10	7.85	83.4
ST047041	24.60	0.24	0.008	0.008	1.34	0.080	2.79	0.010	0.000	0.000	0.015	0.000	0.023	0.002	0.000	0.006	1.20	0.20	10	7.50	84.5
ST057042	24.60	0.29	0.008	0.010	1.27	0.080	2.75	0.015	0.000	0.000	0.019	0.000	0.034	0.004	0.000	0.001	1.62	0.20	10	7.32	84.6
ST057043	25.60	0.30	0.007	0.006	1.57	0.083	3.05	0.019	0.000	0.000	0.015	0.000	0.026	0.005	0.000	0.005	1.16	0.21	10	7.94	84.0
ST057044	27.26	0.24	0.007	0.007	1.54	0.071	3.17	0.023	0.000	0.000	0.016	0.000	0.036	0.007	0.000	0.007	1.53	0.22	10	7.60	84.2

cc: M. Royer
 R. Theissen
 G. Vera

Cedar Chemical Co.

RHÔNE-POULENC INC.

P O Box 125 - Black Horse Lane - Monmouth Junction, New Jersey 08852 - Telephone (201) 297-0100 - Telex 844527

Charlie
Tom
Richard
Joe
Ken
Joel

May 18, 1987

OVERNIGHT EXPRESS MAIL

Mr. Ron Cheves
Vice President
CEDAR CHEMICAL CORPORATION
5100 Poplar Avenue
24th Floor
Memphis, Tennessee 38137

Dear Mr. Cheves:

Pursuant to our Letter Agreement, dated September 5, 1986, please be advised that Rhone-Poulenc shall not issue future purchase orders for the production of either RP-15 or RP-10.

Very truly yours,

RHONE-POULENC INC.

By:


~~Jean-Pierre Dal Pont~~
Vice President
TECHNICAL SERVICES



ADEQ0017532

RHÔNE-POULENC INC.

P.O. Box 125 - Black Horse Lane - Monmouth Junction, New Jersey 08852 - Telephone (201) 297-0100 - Telex 844527

Charlie
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By:



~~Jean-Pierre Dal Pont~~
Vice President
TECHNICAL SERVICES



ADEQ0017704

ASSIGNMENT AND ASSUMPTION AGREEMENT

THIS ASSIGNMENT AND ASSUMPTION AGREEMENT (the "Agreement") is entered into effective as of June 1, 1997, by and between Cedar Chemical Corporation, a Delaware corporation, ("Cedar") and Rhone-Poulenc Ag Company, a Delaware corporation, ("RPAC").

W I T N E S S E T H:

WHEREAS, Cedar and Micro Flo Company, a Georgia corporation, ("Micro Flo") have entered into a Supply Agreement, a true and correct copy of which is attached hereto as Exhibit A (the "Supply Agreement") pursuant to which Cedar is obligated to supply and Micro Flo is obligated to purchase certain quantities of Ethephon (hereinafter "Product") in accordance with the terms and conditions of the Supply Agreement; and

WHEREAS, Cedar has entered into a Memorandum of Understanding with Rhone Poulenc Agrochimie SA, a French corporation, (hereinafter "RPA"), pursuant to which Cedar expects to enter into a definitive agreement to produce certain products for RPA for an extended term (hereinafter referred to as the "Term"), subject, however, to Cedar's being relieved by Micro Flo of its obligations under the Supply Agreement in accordance with the terms hereof; and

WHEREAS, RPAC desires to assume and perform Cedar's obligations under the Supply Agreement with Micro Flo in accordance with the terms and conditions hereof.

NOW, THEREFORE, in consideration of the premises and the mutual covenants set forth herein, the parties agree as follows:

1. Assignment. Subject to the provisions of Paragraph 3 of this Agreement, Cedar hereby assigns to RPAC its entire right, interest and obligations in and under the Supply Agreement effective as of the date first above appearing (the "Effective Date") and continuing thereafter throughout the Term referred to herein, but in any event through October 1997.

2. Assumption. As of the Effective Date, subject to the provisions of Paragraph 3 of this Agreement, RPAC assumes and agrees to perform Cedar's obligations under the Supply Agreement throughout the Term referred to herein, but in any event through October 1997.

3. Inventory. Cedar's entire inventory of Product (the "Inventory") totalling approximately 328,000 pounds on a 100% active ingredient basis as of the Effective Date hereof will be sold to Micro Flo at a price of \$3.63 per pound (the "Purchase Price") by not later than October 1997. The exact quantity of Cedar's Inventory sold to Micro Flo shall be certified to RPAC by Cedar on or before November 15, 1997, which quantity shall be subject to verification and audit by RPAC at its expense. In the event Micro Flo's Net Selling Price (as defined in the Supply Agreement) for the period April through October 1997 shall exceed \$31.00 per pound, RPAC shall sell direct Micro Flo to pay to Cedar such increase in the Purchase Price for that quantity of Inventory sold by Cedar to Micro Flo, as aforesaid, determined in accordance with the schedule set forth on Exhibit B to the Supply Agreement. RPAC shall cause such sum to be paid to Cedar within fifteen (15)

days of the date of determination of the adjusted Purchase Price in accordance with the terms of the Supply Agreement.

4. Commissions. RPAC shall pay to Cedar a commission of \$1.35 per pound for all quantities of Product sold by RPAC to Micro Flo up to 1,250,000 pounds in each calendar year during the Term hereof; provided that, for the 1997 calendar year, Cedar's commissions shall be payable with respect to all quantities of Product sold by RPAC to Micro Flo in said calendar year; provided further that, in said calendar year, RPAC shall pay commissions determined hereunder on no less than 1,250,000 pounds of Product less the number of pounds of Product in Cedar's Inventory sold by Cedar to Micro Flo, as determined in accordance with Paragraph 3 of this Agreement. Commissions hereunder shall be payable to Cedar sixty (60) days from the date of each such shipment to Micro Flo. Any payment required by RPAC in order for its commissions payable for the calendar year 1997 to total the minimum commissions payable in said year, as aforesaid, shall be due and payable to Cedar the 1st day of March, 1998. Cedar's said commission on sales of Product sold to Micro flo in each calendar year during the Term referred to herein shall be increased by the amount by which the price of Product sold by RPAC to Micro Flo shall exceed \$3.63 per pound, as determined under Paragraph 4 of the Supply Agreement, such additional commissions, if any, to be due and payable by RPAC to Cedar within fifteen (15) days following the determination of Micro Flo's Final Net Selling Price under the Supply Agreement in each calendar year during the Term referred to herein. It is understood

that, subject to Cedar and RPA entering into one or more agreements as contemplated under the MOU, this Agreement shall be amended to suspend RPAC's obligation to pay commissions on sales of Micro Flo under the Supply Agreement during each calendar year during the Term hereof following the 1997 calendar year.

5. Reassignment. In the event of the expiration or termination of the Term of Cedar's anticipated contract with RPA prior to December 31, 2006, or, if Cedar and RPA shall not have entered into such a contract by October 31, 1997, RPA shall, immediately upon notice by Cedar, reassign to Cedar its entire right, interest and obligations under the Supply Agreement, and, in that event, Cedar shall reassume and perform all of its obligations thereunder from and after the date of such reassignment, whereupon Cedar's rights and RPAC's obligations under this Agreement shall terminate except for such rights and obligations as shall have accrued as of the Effective Date of such reassignment.

6. Condition Precedent. This Agreement shall be effective only upon Micro Flo's execution and delivery to Cedar and RPAC of the Consent Agreement in the form attached hereto as Exhibit B.

7. Warranties and Covenants.

A. RPAC warrants and covenants as follows:

(1) It has full power and authority to execute and deliver this Agreement and to perform its obligations hereunder. This Agreement constitutes the valid and legally binding obligation of RPAC, enforceable in accordance with its terms.

(2) Neither the execution and delivery of this Agreement nor the consummation of the transactions contemplated hereby will violate any provision of RPAC's Charter or By-Laws nor conflict with, result in a breach of, constitute a default under, or require any notice under any agreement to which RPAC is a party or by which it is bound.

(3) It will comply fully with the terms of the Supply Agreement assumed by it hereunder, and it will not during the Term hereof enter into any amendment of the Supply Agreement nor otherwise alter or assign the Supply Agreement without Cedar's prior written consent.

B. Cedar warrants and covenants as follows:

(1) It has full power and authority to execute and deliver this Agreement and to perform its obligations hereunder. This Agreement constitutes the valid and legally binding obligation of Cedar, enforceable in accordance with its Terms.

(2) Neither the execution and delivery of this Agreement nor the consummation of the transactions contemplated hereby will violate any provision of Cedar's Charter or By-Laws nor conflict with, result in a breach of, constitute a default under, or require any notice under any agreement to which Cedar is a party or by which it is bound.

(3) The Supply Agreement attached hereto as Exhibit A is in full force and effect; neither Cedar nor Micro Flo is in default of the terms thereof; and there are no terms or

conditions with respect thereto which are not set forth in said Exhibit A.

8. Indemnification by RPAC. RPAC shall indemnify, defend, and hold harmless Cedar against and in respect of any and all claims, demands, losses, costs, expenses, obligations, liabilities, damages, recoveries, and deficiencies, including reasonable attorney's fees (collectively "Damages"), that Cedar incurs or suffers, which arise, result from, or relate to, any breach of, or failure by RPAC to perform, any of its representations, warranties, covenants or agreements set forth herein.

9. Indemnification by Cedar. Cedar shall indemnify, defend, and hold harmless RPAC against and in respect of any and all claims, demands, losses, costs, expenses, obligations, liabilities, damages, recoveries, and deficiencies, including reasonable attorney's fees (collectively "Damages"), that RPAC incurs or suffers, which arise, result from, or relate to, any breach of, or failure by Cedar to perform, any of its representations, warranties, covenants or agreements set forth herein.

10. Miscellaneous:

A. Survival. All of the representations and warranties of the parties contained in Paragraph 7 of this Agreement shall survive the Effective Date indefinitely.

B. Entire Agreement, Amendments. This Agreement constitutes the entire agreement between the parties and supersedes

any prior understandings, agreements, or representations by or between the parties, written or oral, to the extent they relate in any way to the subject matter hereof. No amendment of any provision of this Agreement shall be valid unless the same shall be in writing and signed by RPAC and Cedar.

C. Succession and Assignment. This Agreement shall be binding upon and inure to the benefit of the parties named herein and their respective successors and permitted assigns. No party may assign either this Agreement or any of its rights, interest, or obligations hereunder without the prior written approval of the other party.

D. Counterparts. This Agreement may be executed in one or more counterparts, each of which shall be deemed an original but all of which together will constitute one and the same instrument.

E. Headings. The section headings contained in this Agreement are inserted for convenience only and shall not affect in any way the meaning or interpretation of this Agreement.

F. Notices. All notices, requests, demands, claims, and other communications hereunder will be in writing. Any notice, request, demand, claim, or other communication hereunder shall be deemed duly given if it is sent by registered or certified mail, return receipt requested, postage prepaid (and then two business days after), or if it is sent by a nationally-recognized overnight courier service (and then one business day after), and addressed to the intended recipient as set forth below:

If to Cedar:

J. Randal Tomblin
President, Organics
Division
Cedar Chemical Corporation
24th Floor, Clark Tower
5100 Poplar Avenue
Memphis, TN 38137

If to RPAC:

G. Governing Law. This Agreement shall be governed by and construed in accordance with the laws of the State of Delaware, without giving effect to any choice or conflict of law provision or rule.

H. Severability. Any germ or provision of this Agreement that is invalid or unenforceable in any situation in any jurisdiction shall not affect the validity or enforceability of the remaining terms and provisions hereof or the validity or enforceability of the offending term or provision in any other situation or in any other jurisdiction.

EXECUTED by the parties as of the effective date hereof.

ATTEST:

CEDAR CHEMICAL CORPORATION

John Bumpson

BY: J. Randal Tomblin

J.P.
RHONE-POULENC AG COMPANY

BY: [Signature]

F.O. DATE: 6/24/97 PAGE

REQUISITIONER: CHRISTIAN

VENDOR: RHONE POULENC SECTEUR AGR
14 20 RUE PIERRE DAIJET
BP 2103
LYON CEDEX 07 FRANCE
67203

DATE REC.:
6/6
VIA:
PRO NO.:
FRT. CHARGE:
SHIPPER NO:

INV. NO.:
VENDOR REF.:
SHIPPER WOHNT:
FPD/COLL:
REC. BY:

SHIP FROM:

F.O.D.:
DUTY NOT PAID
DATE REQUIRED:
6/20/97

FREIGHT TERMS:
BUYER

PAYMENT TERMS:
N90 CIF NOLA

VENDOR NO.:
24804 - 04
TAX PERMIT:
3553

SHIP VIA:

ITEM	QUANTITY ORDERED	QUANTITY RECEIVED	UNIT	INVENTORY NUMBER	DESCRIPTION	ACCOUNT NUMBER	UNIT PRICE
	20	370,400	LBS	4 0150	DCPI 98% MIN C OF A REQUIRED	8 715 1460	2.36 LBS

REG. NO. 14157 BY CHRISTIAN

SHIP FROM FRANCE
TO BE SHIPPED IN 2 150 TANKS

PRODUCT PRODUCED FROM R P DCA
THIS DCPI THRU FTZ

THIS F.O. REPLACES#04 050577

*** CONFIRMATION ***

RAW MATERIAL RECEIVING RECORD No 10015

CEDAR CHEMICAL 9000-1 REV: C

TIME IN AT GATE
12:15

RECEIVED BY
M. Sullivan

SECTION 1

DATE	ORDER NO.	CAR OR TRUCK NO.	DECLARED WEIGHT
------	-----------	------------------	-----------------

6-25-97	0109611	CCRU197213-0	Net: 43100
---------	---------	--------------	-----------------------

SHIPPER	CARRIER
<i>Hilsco / Windsor</i>	<i>Triple E</i> 42879

QUANTITY	CONTAINER	DESTINATION	RAW MAT CODE #	DESCRIPTION
1	S/C	unit #2	40150	DCP1

COMMENTS
Lab Has C.O.A.

SECTION 2

RECIPIENT	TIME SAMPLE/CERTIFICATE TAKEN TO LAB
-----------	--------------------------------------

<i>M. W. W.</i>	12:50 Lab has CoA
-----------------	-------------------

UNLOADED AT (tank number, unit, warehouse, etc.)
Hold at Unit until we need it

COMMENTS

SECTION 3

LAB TECHNICIAN	ACCEPT	REJECT	REASON FOR REJECTION
----------------	--------	--------	----------------------

<i>M</i>	✓	1	
----------	---	---	--

COMMENTS
CoA 99.65

SECTION 4

SHIFT SUPERVISOR	ACCEPT	REJECT	REASON FOR REJECTION
------------------	--------	--------	----------------------

<i>[Signature]</i>	✓		
--------------------	---	--	--

PLANT WEIGHT	UNLOADING TIMES	
--------------	-----------------	--

NET <i>42110</i>	START TIME <i>4/25/97 13:00</i>	END TIME
------------------	---------------------------------	----------

COMMENTS

DEPARTMENT OF THE TREASURY
UNITED STATES CUSTOMS SERVICE

**APPLICATION FOR
FOREIGN-TRADE ZONE ADMISSION
AND/OR STATUS DESIGNATION**

CENSUS USE ONLY

19 CFR 146.22, 146.32, 146.35, 146.37, 146.39-146.41, 146.44, 146.53, 146.68

1 ZONE NO AND LOCATION (Address)
CEDAR CHEMICAL CORPORATION
FTZ 14B
HIGHWAY 242 SOUTH
WEST HELENA, ARKANSAS 72390

2 DISTRICT/PORT CODE
20-06 MEMPHIS, TENNESSEE

3 IMPORTING VESSEL (& FLAG)/OTHER CARRIER (MX) M/V NUEVO LEON V.30W	4 EXPORT DATE 5/17/97	5 IMPORT DATE 6/7/97	6 ZONE ADMISSION NO 19970625-10
7 U.S. PORT OF UNLADING NEW ORLEANS, LA.	8 FOREIGN PORT OF LADING LE HAVRE	9 BILL OF LADING/AWB NO TEMULHNLN30W0628	10 INWARDManifest NO N/A
11 INBOND CARRIER TRIPLE E TRANSPORT	12 IT NO AND DATE #313,963,580 6/24/97	13 IT FROM (Port) NEW ORLEANS, LA.	

14 STATISTICAL INFORMATION FURNISHED DIRECTLY TO BUREAU OF CENSUS BY APPLICANT? YES NO

15 NO OF PACKAGES AND COUNTRY OF ORIGIN	18 DESCRIPTION OF MERCHANDISE	17 HTSUS NO	18 QUANTITY (HTSUS)	19 GROSS WEIGHT	20 SEPARATE VALUE & AGGR CHGS
1 C/O FR	(20') TANK CONTAINER: 3,4-DICHLOROPHENYLISOCYANATE (3,4-DCPI) TOXIC LIQUID HAZARDOUS CARGO CLASS 6.1 UN 2250 P.G. II EMERGENCY TELEPHONE: (800) 424-9390 CONTAINER NBR CCRU-1972130 ZONE-TO-ZONE TRANSFER NPF FTZ #2 ADMISSION No. 23971	E 2929.10.3000	19450 KG	24070 KG	\$102112.CI \$1493.ND \$100619.FO
21 HARBOR MAINTENANCE FEE (19 CFR 24.24) <input type="checkbox"/>					\$125.77

22 I hereby apply for admission of the above merchandise into the Foreign-Trade Zone. I declare to the best of my knowledge and belief that the above merchandise is not prohibited entry into the Foreign-Trade Zone within the meaning of section 3 of the Foreign Trade Zones Act of 1934, as amended, and section 146.31, Customs Regulations.

23 I hereby apply for the status designation indicated:

NONPRIVILEGED FOREIGN (19 CFR 146.42) PRIVILEGED FOREIGN (19 CFR 146.41) ZONE RESTRICTED (19 CFR 146.44) DOMESTIC (19 CFR 146.43)

24 APPLICANT FIRM NAME CEDAR CHEMICAL CORPORATION	25 (Signature) <i>Bob Christie</i>	26 TITLE Mgr Purch.	27 DATE 7-3-97
FTZ AGREES TO RECEIVE MERCHANDISE INTO THE ZONE <input type="checkbox"/>	28 FOR THE FTZ OPERATOR (Signature) <i>Bob Christie</i>	29 TITLE Mgr Purch.	30 DATE 7-3-97
PERMIT Permission is hereby granted to transfer the above merchandise into the Zone.	31 DISTRICT DIRECTOR OF CUSTOMS BY (Signature)	32 TITLE	33 DATE
PERMIT The above merchandise has been granted the requested status	34 DISTRICT DIRECTOR OF CUSTOMS BY (Signature)	35 TITLE	36 DATE

37 The goods described herein are authorized to be transferred without exception except as noted below

38 CUSTOMS OFFICER AT STATION (Signature)	39 TITLE	40 STATION	41 DATE
42 RECEIVED FOR TRANSFER TO ZONE (Driver's Signature)	43 CARTMAN	44 CHL NO	45 DATE

FTZ OPERATOR'S REPORT OF MERCHANDISE RECEIVED AT ZONE

46 To the District Director of Customs The above merchandise was received at the Zone on the date shown except as noted below

47 (Signature)
Bob Christie

48 (Signature)
Mgr Purch.

49 DATE
7-3-97

WEIGHED ON A FAIRBANKS SCALE

DATE 6/25/97

CUSTOMERS NAME Cedar Chem.

ADDRESS W. Helena, Ar

COMMODITY DCPT

CARRIER Triple E

REMARKS 5/2 No. - CCRU 197213.0

77040 12:11PM JUN 25 97 gross wt.

7160 tractor only

59880 tractor & fuel trailer

16900 NET product

42980

LBS. GROSS

LBS. TARE - DRIVER ON _____ OFF X

LBS. NET @ _____ PER LB. PRICE _____

SHIPPER _____

WEIGHER _____

FAIRBANKS SCALE CAT. 083908

WEIGHED ON A FAIRBANKS SCALE

DATE 7-3-97

CUSTOMERS NAME GULF States MARCO

ADDRESS ARABI, LA

COMMODITY DCPT Residue

CARRIER TRIPLE E

REMARKS

33900 08:42AM JUL 03 97 Tractor & mt container LBS. GROSS

LBS. TARE - DRIVER ON _____ OFF _____

LBS. NET @ _____ PER LB. PRICE _____

SHIPPER Lester Allen

WEIGHER _____

Tractor
17000

08:36AM JUL 03 97

16900 mt container

FAIRBANKS SCALE CAT. 083908

D

Approved through 01/31/94, OMB No. 1515-0086

CENSUS USE ONLY

DEPARTMENT OF THE TREASURY
UNITED STATES CUSTOMS SERVICE

APPLICATION FOR
FOREIGN-TRADE ZONE ADMISSION
AND/OR STATUS DESIGNATION

19 CFR 146.22, 146.32, 146.33-146.37, 146.39-146.41, 146.44, 146.53, 146.68

1. ZONE NO. AND LOCATION (Address)
CEDAR CHEMICAL CORPORATION
FTZ 148
HIGHWAY 242 SOUTH
WEST HELENA, ARKANSAS 72390

2. DISTRICT/PORT CODE:
20-06 MEMPHIS, TENNESSEE

3. IMPORTING VESSEL (& FLAG)/OTHER CARRIER (MX) M/V NUEVO LEON V.30W	4. EXPORT DATE 5/17/97	5. IMPORT DATE 6/7/97	6. ZONE ADMISSION NO. 14470625-10
7. U.S. PORT OF UNLOADING NEW ORLEANS, LA.	8. FOREIGN PORT OF LADING LE HAYRE	9. BILL OF LADING/AWB NO. TEMULHNLN30W0628	10. INWARD M/FEST NO. N/A
11. INBOND CARRIER TRIPLE E TRANSPORT	12. LT. NO. AND DATE #319,963,580 6/24/97	13. LT. FROM (Port) NEW ORLEANS, LA.	
14. STATISTICAL INFORMATION FURNISHED DIRECTLY TO BUREAU OF CENSUS BY APPLICANT?		<input type="checkbox"/> YES <input type="checkbox"/> NO	

15. NO. OF PACKAGES AND COUNTRY OF ORIGIN	16. DESCRIPTION OF MERCHANDISE	17. HTSUS NO.	18. QUANTITY (HTSUS)	19. GROSS WEIGHT	20. SEPARATE VALUE & AGGR CHGS
1 C/O FR	(20') TANK CONTAINER: 3,4-DICHLOROPHENYLISOCYANATE (3,4-DCPI) TOXIC LIQUID HAZARDOUS CARGO CLASS 6.1 UN 2250 P.G. II EMERGENCY TELEPHONE: (800) 424-9390 CONTAINER NBR CCRU-1972130 ZONE-TO-ZONE TRANSFER NPF FTZ #2 ADMISSION No. 23971	2929.10.3000	19450 KG	24070 KG	\$102112.C1 \$1493.NO \$100619.F0
21. HARBOR MAINTENANCE FEE (19 CFR 24.24)					\$25.77

22. I hereby apply for admission of the above merchandise into the Foreign-Trade Zone. I declare to the best of my knowledge and belief that the above merchandise is not prohibited entry into the Foreign-Trade Zone within the meaning of section 3 of the Foreign-Trade Zones Act of 1934, as amended, and section 146.31, Customs Regulations.

23. I hereby apply for the status designation indicated:

NONPRIVILEGED FOREIGN (19 CFR 146.42) PRIVILEGED FOREIGN (19 CFR 146.41) ZONE RESTRICTED (19 CFR 146.44) DOMESTIC (19 CFR 146.43)

24. APPLICANT FIRM NAME CEDAR CHEMICAL CORPORATION	25. SIGNATURE <i>Bob Christie</i>	26. TITLE Mgr Purch.	27. DATE 7-3-97
F.T.Z. AGREES TO RECEIVE MERCHANDISE INTO THE ZONE	28. SIGNATURE FOR THE F.T.Z. OPERATOR <i>Bob Christie</i>	29. TITLE Mgr Purch.	30. DATE 7-3-97
PERMIT Permission is hereby granted to transfer the above merchandise into the Zone.	31. DISTRICT DIRECTOR OF CUSTOMS: BY (Signature) <i>[Signature]</i>	32. TITLE SI	33. DATE 7/1/97
PERMIT The above merchandise has been granted the requested status.	34. DISTRICT DIRECTOR OF CUSTOMS: BY (Signature) <i>[Signature]</i>	35. TITLE SI	36. DATE 7/1/97

37. The goods described herein are authorized to be transferred: without exception except as noted below

38. CUSTOMS OFFICER AT STATION (Signature) <i>[Signature]</i>	39. TITLE SI	40. STATION	41. DATE 7-1-97
42. RECEIVED FOR TRANSFER TO ZONE (Driver's Signature)	43. CARTMAN	44. CHL NO.	45. DATE

46. To the District Director of Customs, The above merchandise was received at the Zone on the date shown except as noted below:

47. SIGNATURE FOR THE FTZ OPERATOR (Signature) <i>Bob Christie</i>	48. TITLE Mgr Purch.	49. DATE 7-3-97
---	-------------------------	--------------------

REF: 973245.
49 CFR 10.60, 10.61, 18, 123.41, 123.42

Form Approved
OMB No. 1515-0005

**TRANSPORTATION ENTRY AND MANIFEST OF
GOODS SUBJECT TO CUSTOMS INSPECTION
AND PERMIT**

403

FTZ Entry No. 23971
Port NEW ORLEANS, LA.
Date 6/11/97

Entry No. 313,963,580
Class of Entry I, I, I
(I.T.)(Wd.T.)(Wd.Ex.)(T.E.)(Drawback, etc.)

UNITED STATES CUSTOMS SERVICE

Dist No 20 Port Code No 02 First U.S. Port of Unloading NEW ORLEANS, LA.
Port of NEW ORLEANS, LA. Date 6/24/97

Entered or imported by CEDAR CHEMICAL CORPORATION to be shipped
in bond via TRIPLE E TRANSPORT BOND No. 209100312 consigned to
(CHL Number) (Vessel or carrier) (Car number and initial) (Port or station)
District Director of Customs At 2006 MEMPHIS, TN Final foreign destination
(For exportations only)
Consignee CEDAR CHEMICAL CORP. FTZ 14B HIGHWAY 242 SOUTH WEST HELENA, AR 72390
(At customs port of exit or destination)
Foreign port of lading LE HAVRE B/L No. TEMULHNLN30W0628 Date of sailing 5/17/97
(Show information to be furnished only when merchandise is imported by vessel)
Imported on the M/V NUEVO LEON V.30W Flag MX on 6/7/97 via DIRECT
(Name of vessel or carrier and motive power) (Date imported) (Last foreign port)
Exported from FRANCE on 5/17/97 Goods now at FOREIGN TRADE ZONE No. 2
(Country) (Date) (Name of warehouse, station, pier, etc.)

Marks and Numbers of Packages	DESCRIPTION AND QUANTITY OF MERCHANDISE NUMBER AND KIND OF PACKAGES (Describe fully as per shipping papers)	GROSS WEIGHT IN POUNDS	VALUE (Dollars only)	RATE	DUTY
CCRU-1972130	1 (20') TANK CONTAINER: 3,4-DICHLOROPHENYLISOCYANATE (3,4-DCPI) TOXIC LIQUID HAZARDOUS CARGO CLASS 6.1 UN 2250 P.G. II SECURITY SHEET: 6.1 - 04 M.F.A.G. TABLE: 370 EMERGENCY TELEPHONE: (800) 424-9390 HTSUS 2929.10.3000 C/O FR MFG: FRRHOAGR142OLYO ZONE-TO-ZONE TRANSFER NPF FTZ #2 ZONE ADMISSION #23971	53065	102112	EST.	NOT VERIFIED

FTZ 14B
DIRECT DELIVERY PROGRAM
6-25-97
Bob Christ
SIGNATURE

GU No. _____

CERTIFICATE OF LADING FOR TRANSPORTATION IN BOND AND/OR LADING FOR EXPORTATION FOR
2006 MEMPHIS, TENNESSEE
(Port)

WITH THE EXCEPTIONS NOTED ABOVE, THE WITHIN-DESCRIBED GOODS WERE Delivered to the Carrier named above, for delivery to the District Director of Customs at destination sealed with Customs seals

Laden on the _____
(Vessel, vehicle or aircraft)

which cleared for _____

Nos _____ or the packages (were) (were not) labeled, or corded and sealed.

on _____
(Date)

as verified by export records _____
(Inspector)

(Inspector or warehouse officer) _____
(Date)

I truly declare that the statements contained herein are true and correct to the best of my knowledge and belief

Entered or withdrawn by CEDAR CHEMICAL CORPORATION
by PHILBIN, CAZALAS & ST. JOHN, INC.
Atty in fact *[Signature]*

To the Inspector or Warehouse Officer the above described goods shall be disposed of as specified herein

For the District Director of Customs, _____

Received from the District Director of Customs of above district the merchandise described in this manifest for transportation and delivery into the custody of the customs officers at the port named above, all packages in apparent good order except as noted hereon.

TRIPLE E TRANSPORT *[Signature]*
Attorney or Agent of Carrier

Consult customs officer or Part 18, Customs Regulations for the appropriate number of copies required for entry, withdrawal, or manifest purposes.
 For the purpose of transfer under the cartage or lighterage provisions of a proper bond to the place of shipment from the port of entry, extra copies bearing a stamp or notation as to their intended use may be required for local administration.
 As the form is the same whether used as an entry or withdrawal or manifest, all copies may be prepared at the same time by carbon process, unless more than one vessel or vehicle is used, in which case a separate set of manifest must be prepared for each such vessel or vehicle.
 Whenever this form is used as an entry or withdrawal care should be taken that the kind of entry is plainly shown in the block in the upper right-hand corner of the face of the entry.
 This form may be printed by private parties provided that the supply printed conforms to the official form in size, wording, arrangement, and quality and color of paper and ink. For sale by District Directors of Customs.

RECORD OF CARTAGE OR LIGHTRAGE

Delivered to Cartman or Lighterman in apparent good condition except as noted on this form.

CONVEYANCE	QUANTITY	DATE	DELIVERED	RECEIVED	RECEIVED
<i>Triple E CHB-209100 312</i>	<i>1 contain</i>	<i>4/24/77</i>	<i>John J. [Signature]</i> (Inspector of Warehouse Officer)	<i>Triple E Kenneth [Signature]</i> (Cartman or Lighterman)	(Date) (Inspector)
			(Inspector of Warehouse Officer)	(Cartman or Lighterman)	(Date) (Inspector)
			(Inspector of Warehouse Officer)	(Cartman or Lighterman)	(Date) (Inspector)
Total			(Warehouse proprietor)		

CERTIFICATES OF TRANSFER (If required)

CERTIFICATES OF TRANSFER (If required)	INSPECTED
I certify that within - described goods were transferred by reason of _____ to _____ on _____ at _____ and sealed with _____ or seals Nos _____ and that goods were in same apparent condition as noted on original lading except _____ Inspector, Conductor or Master	I certify that within - described goods were transferred by reason of _____ to _____ on _____ at _____ and sealed with _____ or seals Nos _____ and that goods were in same apparent condition as noted on original lading except _____ Inspector

If transfer occurs within city limits of a customs port or station - customs officers must be notified to supervise transfer

INSPECTOR'S REPORT OF DISCHARGE AT DESTINATION

Port _____ Station _____ (Date) _____

TO THE DISTRICT DIRECTOR OF CUSTOMS Delivering line _____ Car No _____ Initial _____
Arrived _____ (Date) _____ Condition of car _____ of seals _____ of packages _____

Date of Delivery to Importer or Gen Order	PACKAGES	No and kind of Entry or General Order	Boat, Truck or Lighter No	CONDITIONS

I certify above report is correct _____, Inspector

REF: 973245.
49 CFR 10.80, 20.81, 18, 123.41, 123.42

**TRANSPORTATION ENTRY AND MANIFEST OF
GOODS SUBJECT TO CUSTOMS INSPECTION
AND PERMIT**

403

Form Approved
OMB No. 1515-0005

FTZ Entry No. 23971
Port NEW ORLEANS, LA.
Date 6/11/97

Entry No. 313,962,580
Class of Entry I, S, T.
(LT)(WD,T)(WD,EX)(T,E)(Drawback, etc.)

UNITED STATES CUSTOMS SERVICE
Dist No. 20 Port Code No. 02 First U.S. Port of Unloading NEW ORLEANS, LA.
Port of NEW ORLEANS, LA. Date 6/24/97

Entered or imported by CEDAR CHEMICAL CORPORATION to be shipped
in bond via TRIPLE E TRANSPORT BOND No. 209100312 consigned to
(CHI. Number) (Vessel or carrier) (Car number and initial) (Pier or station)
District Director of Customs At 2006 MEMPHIS, TN Final foreign destination
Consignee CEDAR CHEMICAL CORP. FTZ 14B HIGHWAY 242 SOUTH WEST HELENA, AR 72390
(For exportations only)
Foreign port of lading LE HAVRE B/L No. TEMULHNLN30W0628 Date of sailing 5/17/97
Imported on the M/V NUEVO LEON V.30W Flag MX on 6/7/97 via DIRECT
(Name of vessel or carrier and motive power) (Date imported) (Last foreign port)
Exported from FRANCE on 5/17/97 Goods now at FOREIGN TRADE ZONE No. 2
(Country) (Date) (Name of warehouse, station, pier, etc.)

Marks and Numbers of Packages	DESCRIPTION AND QUANTITY OF MERCHANDISE NUMBER AND KIND OF PACKAGES (Describe fully as per shipping papers)	GROSS WEIGHT IN POUNDS	VALUE (Dollars only)	RATE	DUTY
CCRU-1972130	1 (20') TANK CONTAINER: 3,4-DICHLOROPHENYLISOCYANATE (3,4-DCPI) TOXIC LIQUID HAZARDOUS CARGO CLASS 6.1 UN 2250 P.G. II SECURITY SHEET: 6.1 - 04 M.F.A.G. TABLE: 370 EMERGENCY TELEPHONE: (800) 424-9390 HTSUS 2929.10.3000 C/O FR MFG: FRRHOAGR1420LYO ZONE-TO-ZONE TRANSFER NPF FTZ #2 ZONE ADMISSION #23971	53065	102112	EST.	NOT VERIFIED

FTZ 14B
DIRECT DELIVERY PROGRAM
6-25-97
Bob Chittie
SIGNATURE

GO No. _____
CERTIFICATE OF LADING FOR TRANSPORTATION IN BOND AND/OR LADING FOR EXPORTATION FOR
2006 MEMPHIS, TENNESSEE
(Port)
WITH THE EXCEPTIONS NOTED ABOVE, THE WITHIN-DESCRIBED GOODS WERE
Delivered to the Carrier named above, for delivery to the District Director of Customs at destination sealed with Customs seals
Laden on the _____
(Vessel, vehicle, or aircraft)
which cleared for _____
on _____
(Date)
as verified by export records
(Inspector)
(Date)

I truly declare that the statements contained herein are true and correct to the best of my knowledge and belief.
Entered or withdrawn by CEDAR CHEMICAL CORPORATION
by PHILBIN, CAZALAS & ST. JOHN, INC.
Atty in fact *[Signature]*
To the Inspector or Warehouse Officer the above described goods shall be disposed of as specified herein.
For the District Director of Customs
Received from the District Director of Customs of above district the merchandise described in this manifest for transportation and delivery into the custody of the customs officers at the port named above, all packages in apparent good order except as noted hereon
TRIPLE E TRANSPORT
[Signature]
Attorney or Agent of Carrier

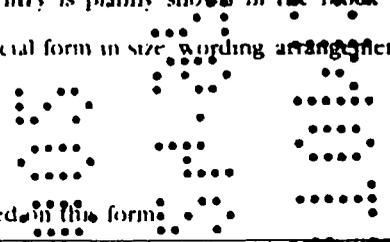
Consult customs officer or Part 18, Customs Regulations, for the appropriate number of copies required for entry, withdrawal, or manifest purposes.

For the purpose of transfer under the cartage or lighterage provisions of a proper bond to the place of shipment from the port of entry, extra copies bearing a stamp or notation as to their intended use may be required for local administration.

As the form is the same whether used as an entry or withdrawal or manifest, all copies may be prepared at the same time by carbon process, unless more than one vessel or vehicle is used in which case a separate set of manifest must be prepared for each such vessel or vehicle.

Whenever this form is used as an entry or withdrawal care should be taken that the kind of entry is plainly shown in the block in the upper right-hand corner of the face of the entry.

This form may be printed by private parties provided that the supply printed conforms to the official form in size, wording, arrangement, and quality and color of paper and ink. For sale by District Directors of Customs.



RECORD OF CARTAGE OR LIGHTTRAGE

Delivered to Cartman or Lighterman in apparent good condition except as noted on this form.

Table with columns: CONVOYANCE, QUANTITY, DATE, DELIVERED, RECEIVED, RECEIVED. Includes handwritten entries for 'Triple E', 'CHB-209 100 3/2', '1 Contain', '4/24/97', and signatures.

CERTIFICATES OF TRANSFER (If required)

Table with two columns: CERTIFICATES OF TRANSFER (If required) and INSPECTED. Contains text for certifying goods were transferred and inspected.

If transfer occurs within city limits of a customs port or station, customs officers must be notified to supervise transfer.

INSPECTOR'S REPORT OF DISCHARGE AT DESTINATION

Port Station (Date) TO THE DISTRICT DIRECTOR OF CUSTOMS Delivering line Car No Initial Arrived Condition of car of seals of packages

Table with columns: Date of Delivery to Importer, or Gen Order, PACKAGES, No and Kind of Entry or Intra Order, Invoice, truck or Lighter No, CONDITIONS ETC.

I certify above report is correct Inspector

TOLOCHIMIE

ADRESSER VOTRE CORRESPONDANCE A :

TOLOCHIMIE - Impasse PALAYRE
B P 1196 - 31037 TOULOUSE CEDEX 1
TEL : 05 61 31 78 78
TÉLÉCOPIE 05 61 31 78 50

N / REF : MF / ML

DATE 14-Mai-97

CEDAR

COMMANDE
EXPEDITION

N° 40124462
N° 429
DU 14/05/97

CAMION CITERNE
CONTAINER
WAGON

N°
N° CCRU 197213-0
N°

N° DE LOT DU PRODUIT

B303A/14.5.97.5

N° DE LOT DU CONDITIONNEMENT

(s' il y a lieu)

CERTIFICAT D'ANALYSE DU 3,4-DICHLOROPHENYLISOCYANATE (ex 3,4-DCA CEDAR)

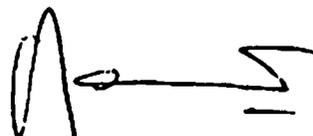
Nous certifions que le produit ci-dessus a la composition suivante :

M E T H O D E	Détermination	Valeur	Unité	Spécification	Méthode d'analyse Tolochimie
1	aspect	conforme		solide blanc	Visuelle
2	3,4-dichlorophénylisocyanate	99.65	%	> 98.5	To 10.27.88
2	2,3-dichlorophénylisocyanate	0.27	%	pour information	To 10.27.88
2	3-chloro + 4-chlorophénylisocyanate	0	%	pour information	To 10.27.88
2	monochlorobenzène	0	%	< 0.2	To 10.27.88
2	semi-lourds	0.02	%	< 0.8	To 10.27.88
autre	isocyanate de chlorotolyle	0.06	%		To 10.27.88
autre			%		

principe de la méthode:

1	visuelle
2	C.P.G
autre	
autre	

LE RESPONSABLE DU CONTROLE ANALYTIQUE



AB0000018604

ORIGINAL

RHONE-POULENC AGRO

14-20 RUE PIERRE BAIZET B P 9163
 68263 LYON CEDEX 09 - FRANCE
 TEL 04 72 85 25 25 - FAX 04 72 85 27 99
 TLX 3'0 098 F RHONE
 N IDENTIFICATION TVA FR 93 969 503 309

DUPLICATE FOR... DATED 27. 0. 1991

TO: [Faint recipient address]

FROM: [Faint sender address]

TERMS OF PAYMENT: [Faint terms text]

EU : NEW UPLEANS

ADDITIONAL INFO: [Faint additional info text]

SA : 2001000

REMARKS: [Faint remarks text]

TOTAL INVOICE VALUE: 204.750.000,00

INVOICE TOTAL: 204.750.000,00

REMARKS: [Faint remarks text]

RHÔNE-POULENC
 SA
 14/20 Rue Pierre Baizet B.P. 9163
 68263 LYON CEDEX 09
 Tel 04 72 85 25 25 Fax 04 72 85 27 99
 S.A. Capital 1 431 515 000 - R.C. LYON B 969 503 309

BILL OF LADING for Combined Transport or Port to Port Shipment
(TERMS CONTINUED FROM REVERSE SIDE) Not Negotiable Unless Consigned to Order

Vessel **LEVO LEON**

Voy. No. **30 W**



Tecomar, s.a. de c.v.
BENJAMIN FRANKLIN No. 232 COL ESCANDON
MEXICO D.F. 06000 TEL. 272-0610 TELEF. 017 72990
R.F.C. TEC. 730302 SH7 REG. ESTADAL 16-01 2678-187



SHIPPER
STOLT-NIELSEN S.A. P/C
PHONE FOULENC SECTEUR AGRO
14/20 RUE PIERRE BAISET
B.P. NO 9163

69 263 LYON - FRANCE -

CONSIGNEE
TO THE ORDER OF :
CEDAR CHEMICAL CORPORATION
HWY 242 SOUTH - PO BOX 2749
WEST HELENA AR. 72390
ATTN : BOB CHRISTIAN

NOTIFY :
GILSCOT - GUIDROZ INTERNATIONAL
2815 DIVISION STREET - SUITE 202 -
MEMPHIS TN 38115 - U.S.A. -
ATTN : KLEIGH GUIDROZ
TEL : 504297 8837 FAX : 504297 8339

NOTIFY 2
STOLT TANKCONTAINERS INC.
15602 JACINTOPORT BLVD.
HOUSTON, TX 77015 - U.S.A.
ATTN : KEVIN FALLON
TEL : 1 (281) 457-1080

COPY NOT NEGOTIABLE

LA LINEA MEXICANA ESPECIALIZADA EN CONTENEDORES
RECEIVED by the Carrier from the Merchant in apparent good order and condition (unless otherwise noted herein) the total number of containers or other packages or units indicated below stated by the Merchant to carry precisely the cargo specified below for transportation subject to all the terms hereof (INCLUDING THE TERMS ON THE REVERSE HERE OF AND THE TERMS OF THE CARRIER'S APPLICABLE TARIFF) from the Place of Acceptance to the Place of Delivery on presentation of this document (duly endorsed) to the Carrier by or on behalf of the Merchant, the rights and liabilities arising in accordance with its terms hereof shall (without prejudice to any rule of common law or statute rendering them binding upon the Merchant) become binding in all respects between the Carrier and Holder as though the contract contained before or enclosed hereby had been made between them.
CONTAINERS AND/OR CARGO ON DECK It is expressly agreed between the Merchant and the Sea-Carrier that Goods stowed into Containers may be loaded on or under deck at the option of the Carrier and that the provisions of the Hague Rules as incorporated herein shall be applicable in all cases whether the transport is carried out on or under deck. Also the Goods and/or Containers shall contribute to General Average whether carried on or under deck.
IN WITNESS whereof the number of original Bills of Lading stated below have been signed one of which being accomplished The others to be void.

(Terms of B-L continued on the back here of)

Place of Receipt	Place of Delivery	Export Reference
LE HAVRE	NEW ORLEANS	

PARTICULARS DECLARED BY THE SHIPPER

Container No	Seal No.	Marks and Nos	NR and Grd of Pkgs	Description of Goods	Gross weight (Kilos)	Measurement (Cu M.)
CCM137213/0				7X20' SHIPPER'S OWNED TANKCONTAINERS SAID TO CONTAIN BULKS OF :	19T450	N. WGT
EXM130581/1				3,4-DICHLOROPHENYLISOCYANATE (3,4 D.C.P.I.) - TOXIC LIQUID HAZARDOUS CARGO :	4T620	TARE
STPJ187008/4				CL : 6.1 ONU : 2250 P.G. : II SECURITY SHEET : 6.1 - 04 M.F.A.G. TABLE : 370	19T500	N. WGT
LGG0243157/3					4T000	TARE
SNH120003/2					17T750	N. WGT
JCR129009/6					3T890	TARE
LGG0243159/4					19T100	N. WGT
					3T700	TARE
					18T850	N. WGT
					3T160	TARE
					19T550	N. WGT
					4T300	TARE
					18T000	N. WGT
					3T890	TARE

FCL / FCL

THC PREPAID FREIGHT AS PER MANIFEST

100000 STOWED AND COUNTERED BY THE SHIPPER
Container Basis Declared value of goods (optional, see clause 12.1) USD

RATES AND CHARGES:

Freight	Rate	Per	Prepaid	Collect
STOLT TANKCONTAINERS INC. 15602 JACINTOPORT BLVD. HOUSTON, TX 77015 - U.S.A. ATTN: KEVIN FALLON TEL : 1 (281) 457-1080				

By accepting this Bill of Lading the Merchant expressly accepts and agrees to all its stipulations, exceptions and conditions whether written, typed, stamped or printed, as fully as if signed by each Merchant.
The Merchant's attention is called to the fact that according to clauses 10, 11, 12 and 17 of the Bill of Lading, the Liability of the Carrier in most cases limited in respect of loss or damage to the Goods and/or by

Place and date of issue
LE HAVRE 17 MAI 1997
Qual de Rougarville BP 607
76059 LE HAVRE CEDEX
Freight payable at
FOR THE CARRIER
TECOMAR S.A de CV

FOR EXCLUSIVE USE OF E.O.P
Traffic Type Payer Region
Number of original B/L
3
B/L No.
TEMULHNLN30W0628

INTERMODAL SHIPPING INSTRUCTIONS
HAZARDOUS MATERIAL SECTION

HAZARDOUS MATERIALS:

PROPER SHIPPING NAME: 3, 4 DCPI

TECHNICAL NAME: 3, 4 Dichlorophenyl Isocyanate

HAZARD CLASS: 6.1 UN OR ID #: 2250

PACKING GROUP: II PAGE: 6128

EMERGENCY CONTACT: Bob CHRISTIAN PHONE #: 501-572-3701 ^{EAT} ₂₂₇

PLACARDED: POISON REPORTABLE QUANTITY: _____

SPECIAL INSTRUCTIONS: _____

NOTE: IF CONTAINER/TRAILER IS LOADED WITH MORE THAN ONE HAZARDOUS COMMODITY, USE A SEPARATE SHEET TO DESCRIBE EACH COMMODITY AND GIVE THE NUMBER OF PIECES AND WEIGHTS.

THIS IS TO CERTIFY THAT THE HEREIN NAMED MATERIALS ARE PROPERLY CLASSIFIED, DESCRIBED, PACKAGED, MARKED AND LABELED AND ARE IN PROPER CONDITION FOR TRANSPORTATION ACCORDING TO THE APPLICABLE REGULATIONS OF THE DEPARTMENT OF TRANSPORTATION.

SIGNED: Bob Christian DATED: 6-30-97

CONTAINER: EXFU 130581/1

BOOKING #:

WEIGHT:

**PORT OF
NEW ORLEANS**

July 1, 1997

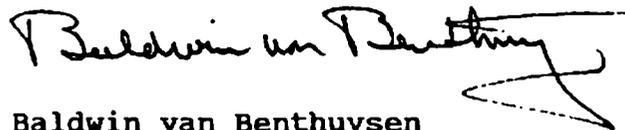
Mr. Bob Christian
Manager, Purchasing
Cedar Chemical Corporation
Post Office Box 2749
West Helena, Arkansas 72390

Dear Mr. Christian:

In accordance with Customs regulations pertaining to the responsibilities of the operator of the transferring zone, we are transmitting to the receiving subzone (FTZ 14B) the enclosed copies of the original custom forms 214 and 7512 as well as the shipping invoice.

The aforementioned documents which are enclosed, relate to the zone transfer of tank containers EXFU 130581-1 and CCRU 197213-0 covered by FTZ #2's zone lot number 23971 and I.T. numbers 313963635 and 313963580 respectively.

Sincerely,



Baldwin van Benthuyzen
Manager
Foreign Trade Zone #2

BVB:nr

Enclosures

REF: 973245.
19 CFR 10.60, 30.61, 18, 123.41, 123.42

TRANSPORTATION ENTRY AND MANIFEST OF
GOODS SUBJECT TO CUSTOMS INSPECTION
AND PERMIT

403

Form Approved
OMB No 1515-0005

FTZ Entry No. 23971
Port NEW ORLEANS, LA.
Date 6/11/97

Entry No. 313,962,580
Class of Entry: I, T.
(I.T.)(Wd.T.)(Wd.Ex.)(T.E.)(Drawback, etc.)

UNITED STATES CUSTOMS SERVICE
Dist No 20 Port Code No 02 First US Port of Unloading NEW ORLEANS, LA.
Port of NEW ORLEANS, LA. Date 6/24/97

Entered or imported by CEDAR CHEMICAL CORPORATION to be shipped
in bond via TRIPLE E TRANSPORT BOND No. 209100312 consigned to
District Director of Customs At 2006 MEMPHIS, TN Final foreign destination
Consignee CEDAR CHEMICAL CORP. FTZ 14B HIGHWAY 242 SOUTH WEST HELENA, AR 72390
Foreign port of lading LE HAVRE B/I No. TEMULHNLN30W0628 Date of sailing 5/17/97
Imported on the M/V NUEVO LEON V. 30W Flag MX on 6/7/97 via DIRECT
Exported from FRANCE on 5/17/97 Goods now at FOREIGN TRADE ZONE No. 2

Marks and Numbers of Packages	DESCRIPTION AND QUANTITY OF MERCHANDISE NUMBER AND KIND OF PACKAGES (Describe fully as per shipping papers)	GROSS WEIGHT IN POUNDS	VALUE (Dollars only)	RATE	DUTY
CCRU-1972130	1 (20') TANK CONTAINER: 3,4-DICHLOROPHENYLISOCYANATE (3,4-DCPI) TOXIC LIQUID HAZARDOUS CARGO CLASS 6.1 UN 2250 P.G. II SECURITY SHEET: 6.1 - 04 M.F.A.G. TABLE: 370 EMERGENCY TELEPHONE: (800) 424-9390 HTSUS 2929.10.3000 C/O FR MFG: FRRHOAGR1420LYO ZONE-TO-ZONE TRANSFER NPF FTZ #2 ZONE ADMISSION #23971	53065	102112	EST.	NOT VERIFIED

G.O. No.

CERTIFICATE OF LADING FOR TRANSPORTATION IN BOND AND/OR LADING FOR EXPORTATION FOR 2006 MEMPHIS, TENNESSEE

WITH THE EXCEPTIONS NOTED ABOVE, THE WITHIN-DESCRIBED GOODS WERE:
Delivered to the Carrier named above, for delivery to the District Director of Customs at destination sealed with Customs seals
Laden on the—
which cleared for—
on—
as verified by export records

I truly declare that the statements contained herein are true and correct to the best of my knowledge and belief
Entered or withdrawn by
CEDAR CHEMICAL CORPORATION
by PHILBIN, CAZALAS & ST. JOHN, INC.
Atty in fact

In the Inspector or Warehouse Officer's presence the above-described goods shall be disposed of as specified herein

Received from the District Director of Customs of above district the merchandise described in this manifest for transportation and delivery into the custody of the customs officers at the port named above, all packages in apparent good order except as noted hereon.

TRIPLE E TRANSPORT

INSTRUCTIONS

Consult customs officer or Part 18 Customs Regulations, for the appropriate number of copies required for entry, withdrawal, or manifest purposes.

For the purpose of transfer under the carriage or lighterage provisions of a proper bond to the place of shipment from the port of entry, extra copies bearing a stamp or notation as to their intended use may be required for local administration.

As the form is the same whether used as an entry or withdrawal or manifest, all copies may be prepared at the same time by carbon process, unless more than one vessel or vehicle is used, in which case a separate set of manifest must be prepared for each such vessel or vehicle.

Whenever this form is used as an entry or withdrawal care should be taken that the kind of entry is plainly shown in the block in the upper right-hand corner of the face of the entry.

This form may be printed by private parties provided that the supply printed conforms to the official form in size, wording, arrangement, and quality and color of paper and ink. For sale by District Directors of Customs.

RECORD OF CARriage OR LIGHTERAGE

Delivered to Cartman or Lighterman in apparent good condition except as noted on this form

Table with columns: CONVEYANCE, QUANTITY, DATE, DELIVERED, RECEIVED, RECEIVED. Includes handwritten entries for 'Triple E' and 'Kenneth Bate'.

CERTIFICATES OF TRANSFER (If required)

INSPECTED

I certify that within - described goods were transferred by reason of ... to ... on ... and sealed with ... Nos ... and that goods were in same apparent condition as noted on original lading except ...

I certify that within - described goods were transferred by reason of ... to ... on ... and sealed with ... Nos ... and that goods were in same apparent condition as noted on original lading except ...

at ... on ... (Date) and seals found ... Inspector

If transfer occurs within city limits of a customs port or station, customs officers must be notified to supervise transfer

INSPECTOR'S REPORT OF DISCHARGE AT DESTINATION

Port ... Station ... Date ... TO THE DISTRICT DIRECTOR OF CUSTOMS Delivering to ... Car No ... Initial ... Arrived ... Condition of car ... of seals ... of packages ...

Table with columns: Date of Delivery to Importer or Gen Order, P.M. & Co., and Date of Entry of Goods to Order, Board of Truck or Trailer No., CONDITIONS ETC.

I certify above report is correct

Inspector

403

REF 973254
19 CFR 10.50, 10.51, 18, 122.41, 123.42

TRANSPORTATION ENTRY AND MANIFEST OF
GOODS SUBJECT TO CUSTOMS INSPECTION
AND PERMIT

UNITED STATES CUSTOMS SERVICE

Entry No. **113,963,635**
Class of Entry **I.T. (61)**
(I.T.)(Wd.T.)(Wd.Ex.)(T.E.)(Drawback, etc.)

FTZ Entry No. **23971**
Port **NEW ORLEANS, LA.**
Date **6/11/97**

Dist. No. **20** Port Code No. **02** First U.S. Port of Unloading **NEW ORLEANS, LA.**
Port of **NEW ORLEANS, LA.** Date **6/30/97**

Entered or imported by **CEDAR CHEMICAL CORPORATION** to be shipped
in bond via **TRIPLE E TRANSPORT** BOND No. **209100312** consigned to
(Carrier Number) (Vessel or carrier) (Car number and initial) (Pier or station)
District Director of Customs At **2006 MEMPHIS, TN** Final foreign destination
(For exportations only)
Consignee **CEDAR CHEMICAL CORP. FTZ 14B HIGHWAY 242 SOUTH WEST HELENA, ARKANSAS 72390**
(At customs port of exit or destination)
Foreign port of lading **LE HAVRE** B/L No. **TEMJHMLN30W0628** Date of sailing **5/17/97**
(Above information to be furnished only when merchandise is imported by vessel) (Date imported)
Imported on the **N/V NUEVO LEON V. 30W** Flag **MX** on **6/7/97** via **DIRECT**
(Name of vessel or carrier and motive power) (Date imported) (Last foreign port)
Exported from **FRANCE** on **5/17/97** Goods now at **FOREIGN TRADE ZONE No. 2**
(Country) (Date) (Name of warehouse station, pier, etc.)

Marks and Numbers of Packages	DESCRIPTION AND QUANTITY OF MERCHANDISE NUMBER AND KIND OF PACKAGES (Describe fully as per shipping papers)	GROSS WEIGHT IN POUNDS	VALUE (Dollars only)	RATE	DUTY
EXFU-130581-1	1 (20') TANK CONTAINER: 3,4-DICHLOROPHENYLISOCYANATE (3,4-DCPI) TOXIC LIQUID HAZARDOUS CARGO CLASS 6.1 UN 2250 P.G. II SECURITY SHEET: 6.1 - 04 M.E.A.G. TABLE: 370 EMERGENCY TELEPHONE: (800) 424-9390 HTSUS 2929.10.3000 C/O FR MFG# FRRH0AGRI420LYO ZONE-TO-ZONE TRANSFER NPF FTZ #2 ZONE ADMISSION #23971	51808	102375	EST. NOT VERIFIED	

GO No. _____
CERTIFICATE OF LADING FOR TRANSPORTATION IN BOND AND/OR LADING FOR EXPORTATION FOR
2006 MEMPHIS, TENNESSEE
WITH THE EXCEPTIONS NOTED ABOVE, THE WITHIN-DESCRIBED GOODS WERE
Delivered to the Carrier named above, for delivery to the District Director of Customs at destination sealed with Customs seals
Laden on the—
(Vessel, vehicle, or aircraft)
which cleared for—
on _____ (Date)
as verified by export records
(Inspector or warehouse officer) (Inspector)
(Date) (Date)

I truly declare that the statements contained herein are correct to the best of my knowledge and belief
Entered or withdrawn by **CEDAR CHEMICAL CORPORATION**
by **PHILBIN, CAZALAS & STUBBS, INC.**
Atty in fact
To the Inspector or Warehouse Officer The above-described goods shall be disposed of as specified herein
For the District Director of Customs
Received from the District Director of Customs of above district the merchandise described in this manifest for transportation and delivery into the custody of the customs officers at the port named above, all packages in apparent good order except as noted hereon
TRIPLE E TRANSPORT
Attorney or Agent of Carrier

INSTRUCTIONS

Consult customs officer or Part 18, Customs Regulations, for the appropriate number of copies required for entry, withdrawal, or manifest purposes.

For the purpose of transfer under the cartage or lighterage provisions of a proper bond to the place of shipment from the port of entry, extra copies bearing a stamp or notation as to their intended use may be required for local administration.

As the form is the same whether used as an entry or withdrawal or manifest, all copies may be prepared at the same time by carbon process, unless more than one vessel or vehicle is used, in which case a separate set of manifest must be prepared for each such vessel or vehicle.

Whenever this form is used as an entry or withdrawal care should be taken that the kind of entry is plainly shown in the block in the upper right-hand corner of the face of the entry.

This form may be printed by private parties provided that the supply printed conforms to the official form in size, wording, arrangement, and quality and color of paper and ink. For sale by District Directors of Customs.

RECORD OF CARTAGE OR LIGHTERAGE

Delivered to Cartman or Lighterman in apparent good condition except as noted on this form

CONVEYANCE	QUANTITY	DATE	DELIVERED	RECEIVED	RECEIVED
<i>Triple E - H. Co. 0209100312</i>	<i>1 Cartone</i>	<i>6/30/97</i>	<i>Amble, J. J. (Inspector of Warehouse Officer)</i>	<i>TRIPLE E Harrison (Cartman or Lighterman)</i>	<i>(Date) (Inspector)</i>
			(Inspector of Warehouse Officer)	(Cartman or Lighterman)	(Date) (Inspector)
			(Inspector of Warehouse Officer)	(Cartman or Lighterman)	(Date) (Inspector)
<i>total</i>			(Warehouse proprietor)		

CERTIFICATES OF TRANSFER (If required)

CERTIFICATES OF TRANSFER (If required)		INSPECTED
I certify that within described goods were transferred by reason of _____ to _____ on _____ at _____ and sealed with _____ or seals Nos _____ and that goods were in same apparent condition as noted on original lading except _____	I certify that within described goods were transferred by reason of _____ to _____ on _____ at _____ and sealed with _____ or seals Nos _____ and that goods were in same apparent condition as noted on original lading except _____	at _____ on _____ (Date) and seals found _____ Inspector
<i>Inspector, Collector, or Master</i>	<i>Inspector, Collector, or Master</i>	

If transfer occurs within city limits of a customs port or station, customs officers must be notified to supervise transfer

INSPECTOR'S REPORT OF DISCHARGE AT DESTINATION

Port _____ Station _____ (Date) _____

TO THE DISTRICT DIRECTOR OF CUSTOMS Delivering line _____ Car No. _____ Initial _____ Arrived _____ (Date) Condition of car _____ of seals _____ of packages _____

Date of Delivery to Importer or Gen. Order	PACKAGES	No. and kind of Entries or General Order	Bonded Truck or Lighter No.	CONDITIONS, ETC.

I certify above report is correct

Inspector

USE ONLY

DEPARTMENT OF THE TREASURY
UNITED STATES CUSTOMS SERVICE

APPLICATION FOR
FOREIGN-TRADE ZONE ADMISSION
AND/OR STATUS DESIGNATION

1. ZONE NO AND LOCATION (Address)
FOREIGN TRADE ZONE No. 2
NAPOLEON AVENUE WHARF
NEW ORLEANS, LA.

2. DISTRICT/PORT CODE
20 - 02 NEW ORLEANS, LA.

19 CFR 146.22, 146.32, 146.35-146.37, 146.39-146.41, 146.44, 146.53, 146.66

3. IMPORTING VESSEL (& FLAG)/OTHER CARRIER
(MX) M/V NUEVO LEON V.30W

4. EXPORT DATE
5/17/97

5. IMPORT DATE
6/7/97

6. ZONE ADMISSION NO
23971

7. U.S. PORT OF UNLADING
NEW ORLEANS, LA.

8. FOREIGN PORT OF LADING
LE HAVRE

9. BILL OF LADING/AWB NO.
TEMULHNLN30W0628

10. INWARD M'FEST NO.
N/A

11. INBOND CARRIER
N/A

12. IT. NO AND DATE
N/A

13. I.T. FROM (Port)
N/A

14. STATISTICAL INFORMATION FURNISHED DIRECTLY TO BUREAU OF CENSUS BY APPLICANT?
 YES NO

15. NO. OF PACKAGES AND COUNTRY OF ORIGIN	16. DESCRIPTION OF MERCHANDISE	17. HTSUS NO	18. QUANTITY (HTSUS)	19. GROSS WEIGHT	20. SEPARATE VALUE & AGGR CHGS
7	(20') TANK CONTAINERS: 3,4-DICHLOROPHENYLISOCYANATE (3,4-DCPI) TOXIC LIQUID HAZARDOUS CARGO CLASS 6.1 UN 2250 P.G. II EMERGENCY TELEPHONE: (800) 424-9390	2929.10.3000	132200 KG	159760 KG	\$694,050.CIF \$10,150.NDC \$683,900.FOB
21. HARBOR MAINTENANCE FEE (19 CFR 24.24) <input checked="" type="checkbox"/>					\$854.88

C/O FR

22. I hereby apply for admission of the above merchandise into the Foreign-Trade Zone. I declare to the best of my knowledge and belief that the above merchandise is not prohibited entry into the Foreign-Trade Zone within the meaning of section 3 of the Foreign-Trade Zones Act of 1934, as amended, and section 146.31, Customs Regulations.

23. I hereby apply for the status designation indicated:
 NONPRIVILEGED FOREIGN (19 CFR 146.42) PRIVILEGED FOREIGN (19 CFR 146.41) ZONE RESTRICTED (19 CFR 146.44) DOMESTIC (19 CFR 146.43)

24. APPLICANT FIRM NAME
CEDAR CHEMICAL CORPORATION

25. BY (Signature)
PHILIPIN, CAZALAS & ST. JOHN INC. Atty in fact

26. TITLE
27. DATE
6/10/97

F.T.Z. AGREES TO RECEIVE MERCHANDISE INTO THE ZONE

28. FOR THE F.T.Z. OPERATOR (Signature)
29. TITLE
30. DATE
6/11/97

PERMIT
Permission is hereby granted to transfer the above merchandise into the Zone.
31. DISTRICT DIRECTOR OF CUSTOMS BY (Signature)
32. TITLE
INSP
33. DATE
6/11/97

PERMIT
The above merchandise has been granted the requested status.
34. DISTRICT DIRECTOR OF CUSTOMS BY (Signature)
35. TITLE
INSP
36. DATE
6/11/97

37. The goods described herein are authorized to be transferred.
 without exception except as noted below

PERMIT TO TRANSFER

38. CUSTOMS OFFICER AT STATION (Signature)
39. TITLE
40. STATION
41. DATE

42. RECEIVED FOR TRANSFER TO ZONE (Driver's Signature)
43. CARTMAN
44. CHL NO
45. DATE

Thomas P. O'Connell
GULF STATES CARTAGE
CHL #187
6/10/97

FTZ OPERATOR'S REPORT OF MERCHANDISE RECEIVED AT ZONE

46. To the District Director of Customs: The above merchandise was received at the Zone on the date shown except as noted below.
CCRN 197079-6 FR2076 SIDE SIDE DENT

47. FOR THE FTZ OPERATOR (Signature)
48. TITLE
49. DATE

AUDIT INSPECTOR FTZ #2
W/B SVP
6-13-97

(Paperwork Reduction Act Notice on Reverse) Customs Form 24 (02/97)

RHONE-POULENC AGRO

14-20, RUE PIERRE BAIZET B P 9163
69263 LYON CEDEX 09 - FRANCE
TEL 04 72 85 25 25 - FAX 04 72 85 27 89
TLX 310 088 F RHONE
N° IDENTIFICATION TVA FR 63 969 503 309

INVOICE NO: 2012004 / DATED: 23.05.1997
SINCE: 1995 01 01

CONSIGNEE: USFLDAR
USFLDAR CHEMICAL CORPORATION
ATTN: BOB CHRISTIAN
HWY 242 SOUTH
AK 72090 WEST HELENA
UNITED STATES

INVOICÉ: USFLDAR
USFLDAR CHEMICAL CORPORATION
ATTN: BOB CHRISTIAN
HWY 242 SOUTH
AK 72090 WEST HELENA
UNITED STATES

DATE: 23.05.1997
VALOR: 22000000
STIPULATED BY: 1
TERMS OF DELIVERY: F.O.B. (INCOTERMS 1990)
TERMS OF PAYMENT: 30 DAYS IN ADVANCE
PAYMENT DATE: 22.06.1997
PAYMENT MODE: TELEGRAPHIC TRANSFER
CURRENCY: USD

100 % 100 %

QUANTITE: 1000000
UNITE: KILOGRAMME
QUANTITE: 1000000
UNITE: KILOGRAMME
QUANTITE: 1000000
UNITE: KILOGRAMME

1000000

REMARKS: (PLEASE PRINT CLEARLY)
1. 23.05.1997
2. 23.05.1997
3. 23.05.1997
4. 23.05.1997

TOTAL DUE TO YOU:

22,000,000 USD

EXCEPTIONAL TAXES: (PLEASE PRINT CLEARLY)

REMARKS: (PLEASE PRINT CLEARLY)

REMARKS: (PLEASE PRINT CLEARLY)

REMARKS: (PLEASE PRINT CLEARLY)

[Handwritten Signature]
Rhone-Poulenc Ag
14-20, Rue Pierre Baizet B P 9163
69263 LYON CEDEX 09
Tel 04 72 85 25 25 - Fax 04 72 85 27 89
S.A. Capital 1 431 516 000 F - RC LYON B 969 503 309

ORIGINAL

RHONE-POULENC AGRO

14-20, RUE PIERRE BAIZET B.P 9163
69263 LYON CEDEX 09 - FRANCE
TÉL. 04 72 85 25 25 - FAX 04 72 85 27 99
TLX 310 088 F RHÔNE
N° IDENTIFICATION TVA FR 53 969 503 309

INVOICE NO: 60115118 DATED 27.05.1997
STAT : 035 01/91

CONSIGNEE: USCEHAYI
CEDAR CHEMICAL CORPORATION
ATTN : 808 CHRISTIAN
HWY 242 SOUTH
AR 72390 WEST HELENA
UNITED STATES

INVOICEE: USCEDAR
CEDAR CHEMICAL CORPORATION
ATTN : 808 CHRISTIAN
P.O. BOX BOX 2749
AR 72390 WEST HELENA
UNITED STATES

O/REF : 01 40127462/0010
Y/REF : 04056577
SHIPPING BY :
TERMS OF DELIVERY : CIF - COST INS FREIG EOC : NEW ORLEANS
TERMS OF PAYMENT : 90 DAYS INVOICE DATE
PAYMENT DATE : 25.08.1997
PAYMENT MODE : TELEGRAPHIC TRANSFER
CURRENCY : USD

PRODUCT CODE : 18576XCIT SH N° : 29291090
MATERIAL NO : 3.4 DCPI CITERNE
QUANTITY : 39000.00 KG
UNIT PRICE : 5.25 USD PER 1 KG
AMOUNT : 204.750.00 USD

MARKING
RHONE POULENC AGRO
3.4-DCPI
CEDAR / USA
N.W.....
G.W.....
NF.....

TOTAL TO BE PAID 204.750.00 USD

EXONERATION TVA ART. 262TER I DU CODE GENERAL DES IMPOTS

TELEGRAPHIC TRANSFER OR SWIFT TO SOCIETE GENERALE LYON GRANDES
ENTREPRISES : ACCOUNT NUMBER 780109828
TRA SWIFT : SWIFT CODE FFPYLYE LYON ENTREPRISES 02280

RHÔNE POULENC
SI... AGRO
14/20 ... te Pierre Baizet B.P. 9163
69263 LYON CEDEX 09
Tél 04 72 85 25 25 Fax 04 72 85 27 99
S.A Capital 1 431 515 000 - R.C LYON 8 989 503 309

RAW MATERIAL RECEIVING RECORD No 10091

CEDAR CHEMICAL 9000-1 REV: C

TIME IN AT GATE
10:00

RECEIVED BY
M. A. ...

SECTION 1

DATE	ORDER NO.	CAR OR TRUCK NO.	DECLARED WEIGHT
7-11-97	0110531	LOGU9431573	Net 42108

SHIPPER	CARRIER
<i>Rhone Poulenc</i>	<i>Triple E</i>

QUANTITY	CONTAINER	DESTINATION	RAW MAT CODE #	DESCRIPTION
1	S/C	unit #2	40150	DCP1

COMMENTS
Lab Has C.O.A.

SECTION 2

RECIPIENT	TIME SAMPLE/CERTIFICATE TAKEN TO LAB
<i>Donde Frank</i>	<i>10:00</i>

UNLOADED AT (tank number, unit, warehouse, etc.)
Unit #2A

COMMENTS
NA

SECTION 3

LAB TECHNICIAN	ACCEPT	REJECT	REASON FOR REJECTION
<i>JH</i>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	

COMMENTS

SECTION 4

SHIFT SUPERVISOR	ACCEPT	REJECT	REASON FOR REJECTION
<i>J. Jones</i>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	

PLANT WEIGHT	UNLOADING TIMES	
NET 42180	START TIME <i>11:00</i>	END TIME <i>1020 7/25/97</i>

COMMENTS
Properly Contained on 10/5/97

WEIGHED ON A FAIRBANKS SCALE

DATE 7/11/97

CUSTOMERS NAME Cedar chemical FLO # 0943157.3

ADDRESS Hwy 242

COMMODITY OCPI

CARRIER TRIPLE E TRACTOR + LOAD 150 REMARKS

REMARKS

75860 10:00AM JL 11 97 full s/c 7 tractor
17160 tractor only

LBS. GROSS _____
LBS. TARE - DRIVER ON _____ OFF
LBS. NET @ _____ PER LB. PRICE _____

58700
16520
42180 NET WT

SHIPPER _____

WEIGHER _____

FAIRBANKS SCALE CAT. 083905

CENSUS USE ONLY

DEPARTMENT OF THE TREASURY
UNITED STATES CUSTOMS SERVICE

**APPLICATION FOR
FOREIGN-TRADE ZONE ADMISSION
AND/OR STATUS DESIGNATION**

1. ZONE NO. AND LOCATION (Address)
**CEDAR CHEMICAL CORPORATION
FTZ 14B
HIGHWAY 242 SOUTH
WEST HELENA, ARKANSAS 72390**

2. DISTRICT/PORT CODE
2006 MEMPHIS, TENNESSEE

19 CFR 146.22, 146.32, 148.35-148.37, 146.39-146.41, 146.44, 146.53, 146.66

3. IMPORTING VESSEL (& FLAG)/OTHER CARRIER (MX) M/V NUEVO LEON V.30W		4. EXPORT DATE 5/17/97	5. IMPORT DATE 6/7/97	6. ZONE ADMISSION NO. 19970711-10
7. U.S. PORT OF UNLADING NEW ORLEANS, LA.	8. FOREIGN PORT OF LADING LE HAVRE	9. BILL OF LADING/AWB NO. TEMULHNLN30W0628	10. INWARD M'FEST NO N/A	
11. INBOND CARRIER TRIPLE E TRANSPORT	12. I.T. NO. AND DATE #313,963,694 7/9/97	13. I.T. FROM (Port) NEW ORLEANS, LA.		

14. STATISTICAL INFORMATION FURNISHED DIRECTLY TO BUREAU OF CENSUS BY APPLICANT? YES NO

15. NO. OF PACKAGES AND COUNTRY OF ORIGIN	16. DESCRIPTION OF MERCHANDISE	17. HTSUS NO	18. QUANTITY (HTSUS)	19. GROSS WEIGHT	20. SEPARATE VALUE & AGGR CHGS.
1 C/O FR	(20') TANK CONTAINER: 3,4- DICHLOROPHENYLISOCYANATE (3,4-DCPI) TOXIC LIQUID HAZARDOUS CARGO CLASS 6.1 UN 2250 P.G. II EMERGENCY TELEPHONE (800) 424-9390 CONTAINER NUMBER LOGU-943157-3 ZONE-TO-ZONE TRANSFER NPF FROM FTZ #2 TO FTZ #14B FTZ #2 ADMISSION No. 23971	2929.10.3000	19100 KG	22800 KG	\$100275. CIF \$1467. NDC \$98808. FOB
21. HARBOR MAINTENANCE FEE (19 CFR 24.24) <input type="checkbox"/>					

22. I hereby apply for admission of the above merchandise into the Foreign-Trade Zone. I declare to the best of my knowledge and belief that the above merchandise is not prohibited entry into the Foreign-Trade Zone within the meaning of section 3 of the Foreign-Trade Zones Act of 1934, as amended, and section 146.31, Customs Regulations.

23. I hereby apply for the status designation indicated:

NONPRIVILEGED FOREIGN (19 CFR 146.42) PRIVILEGED FOREIGN (19 CFR 146.41) ZONE RESTRICTED (19 CFR 146.44) DOMESTIC (19 CFR 146.43)

24. APPLICANT FIRM NAME CEDAR CHEMICAL CORPORATION	25. BY (Signature)	26. TITLE	27. DATE
F.T.Z. AGREES TO RECEIVE MERCHANDISE INTO THE ZONE	28. FOR THE F.T.Z. OPERATOR (Signature)	29. TITLE	30. DATE
PERMIT Permission is hereby granted to transfer the above merchandise into the Zone.	31. DISTRICT DIRECTOR OF CUSTOMS BY (Signature)	32. TITLE	33. DATE
PERMIT The above merchandise has been granted the requested status.	34. DISTRICT DIRECTOR OF CUSTOMS BY (Signature)	35. TITLE	36. DATE

37. The goods described herein are authorized to be transferred without exception except as noted below

PERMIT TO TRANSFER	38. CUSTOMS OFFICER AT STATION (Signature)	39. TITLE	40. STATION	41. DATE
	42. RECEIVED FOR TRANSFER TO ZONE (Driver's Signature)	43. CARTMAN	44. CHL NO	45. DATE

48. To the District Director of Customs: The above merchandise was received at the Zone on the date shown except as noted below:

FTZ OPERATOR'S REPORT OF MERCHANDISE RECEIVED AT ZONE	47. FOR THE FTZ OPERATOR (Signature)	48. TITLE	49. DATE
---	--------------------------------------	-----------	----------

TRANSPORTATION MANIFEST OF
 GOODS TO BE EXPORTED BY
 AIR AND FERRY
 UNITED STATES CUSTOMS SERVICE

Port **NEW ORLEANS, LA.**
 Date **6/11/97**

Dist. No. **20** Port **NEW ORLEANS, LA.** First U.S. Port of Unloading **NEW ORLEANS, LA.**
 Code No. **02** Date **7/2/97**

Entered or imported by **GENCO CHEMICAL CORPORATION** to be shipped
 in bond via **TRIPLE E TRANSPORT** consigned to
 District Director of Customs At **2006 MEMPHIS, TN** Final foreign destination
 Consignee **GENCO CHEMICAL CORP**
 Foreign port of lading **LE HAVRE** B/L No. **TRIPLE E 001** Date of sailing **6/10/97**
 Imported on the **NY NEW LINE V. 300** Flag **FR** on **6/11/97** via **PORT**
 Exported from **FRANCE** on **6/12/97** Goods now at **FRANCE**

Marks and Numbers of Packages	DESCRIPTION AND QUANTITY OF MERCHANDISE NUMBER AND KIND OF PACKAGES (Describe fully as per shipping papers)	GROSS WEIGHT IN POUNDS	VALUE (Dollars only)	RATE	DUTY
1000-003167-3	1 (20') TANK CONTAINER: 3,4-DICHLOROPHTHALISOCYANATE (3,4-DCPI) TOXIC LIQUID HAZARDOUS CARGO CLASS 6.1 UN 2850 P.S. II SECURITY SHEET: 6.1 - 04 H.S.A.S. TABLE: 370 EMERGENCY TELEPHONE: (800) 424-9390 NTS 2929.10.3000 C/O FR NPO# FRENCH1420LYO 2006 TO-ZONE TRANSFER NY FROM FTZ #2 TO FTZ #14B FTZ #2 ADMISSION #23971	60265	100275	EST. NOT VERIFIED	

FTZ 14B
 DIRECT DELIVERY PROGRAM
 7-11-97
Bob Chitt
 SIGNATURE

JUL 16 1997

GO. No. _____
 CERTIFICATE OF LADING FOR TRANSPORTATION IN BOND
 AND/OR LADING FOR EXPORTATION FOR
2006 MEMPHIS, TENNESSEE
 WITH THE EXCEPTIONS NOTED ABOVE, THE WITHIN-
 DESCRIBED GOODS WERE:
 Delivered to the Carrier
 named above, for delivery to
 the District Director of
 Customs at destination sealed
 with Customs seals
 Laden on the—

 (Vessel, vehicle, or aircraft)
 which cleared for—

 on _____
 (Date)
 as verified by export records.

 (Inspector or warehouse officer)

 (Date)

I truly declare that the statements contained herein are true and correct to the best of my knowledge and belief.
 Entered or withdrawn by
GENCO CHEMICAL CORPORATION
By WILKIN, COLAS & ST. JOHN, INC.
Atty. in fact

 To the Inspector or Warehouse Officer: The above-described goods shall be disposed of as provided herein.

 For the District Director of Customs.
 Received from the District Director of Customs of _____ the merchandise described in this manifest for transportation and delivery into the custody of the customs officer at the port named above, all packages in apparent good order except as noted hereon.

 Attorney of Agent of Carrier

INSTRUCTIONS

Consult customs officer or Part 18, Customs Regulations, for the appropriate number of copies required for entry, withdrawal, or manifest purposes

For the purpose of transfer under the cartage or lighterage provisions of a proper bond to the place of shipment from the port of entry, extra copies bearing a stamp or notation as to their intended use may be required for local administration.

As the form is the same whether used as an entry or withdrawal or manifest, all copies may be prepared at the same time by carbon process, unless more than one vessel or vehicle is used, in which case a separate set of manifest must be prepared for each such vessel or vehicle.

Whenever this form is used as an entry or withdrawal, care should be taken that the kind of entry is plainly shown in the block in the upper right-hand corner of the face of the entry

This form may be printed by private parties provided that the supply printed conforms to the official form in size, wording, arrangement, and quality and color of paper and ink For sale by District Directors of Customs

RECORD OF CARTAGE OR LIGHTERAGE

Delivered to Cartman or Lighterman in apparent good condition except as noted on this form

Table with columns: CONVEYANCE, QUANTITY, DATE, DELIVERED, RECEIVED, RECEIVED. Includes handwritten entries for quantity '1 cont' and date '7/10/77'.

CERTIFICATES OF TRANSFER. (If required)

I certify that within described goods were transferred by reason of ... to ... on ... at ... and sealed with ... Nos. ... and that goods were in same apparent condition as noted on original lading except ...

I certify that within described goods were transferred by reason of ... to ... on ... at ... and sealed with ... Nos. ... and that goods were in same apparent condition as noted on original lading except ...

INSPECTED on ... (Date) and seals found ... Inspector

If transfer occurs within city limits of a customs port or station, customs officers must be notified to supervise transfer

INSPECTOR'S REPORT OF DISCHARGE AT DESTINATION

Port ... Station ... TO THE DISTRICT DIRECTOR OF CUSTOMS Delivering line ... Car No. ... Initial ... Arrived ... Condition of car ... of seals ... of packages ...

Table with columns: Date of Delivery to Importer, PACKAGES, No and Kind of Entry or General Order, Bonded Truck or Lighter No., CONDITIONS, ETC.

REF: 973268
19 CFR 10.80, 10.81, 18, 123.41, 123.42

TRANSPORTATION ENTRY AND MANIFEST OF
GOODS SUBJECT TO CUSTOMS INSPECTION
AND PERMIT

403

Form Approved
O.M.B. No. 1515-0005

FTZ Entry No. **23971**
Port **NEW ORLEANS, LA.**
Date **6/11/97**

Entry No. **313,963,694**
Class of Entry **I.T. (61)**
(I.T.)(Wd.T.)(Wd.Ex.)(T.E.)(Drawback, etc.)

UNITED STATES CUSTOMS SERVICE
Dist. No. **20** Port Code No. **02** First U.S. Port of Unlading **NEW ORLEANS, LA.**
Port of **NEW ORLEANS, LA.** Date **7/9/97**

Entered or imported by **CEDAR CHEMICAL CORPORATION** to be shipped
in bond via **TRIPLE E TRANSPORT BOND No. 209100312** consigned to
(CHL Number) (Vessel or carrier) (Car number and initial) (Pier or station)
District Director of Customs At **2006 MEMPHIS, TN** Final foreign destination
(For exportations only)
Consignee **CEDAR CHEMICAL CORP. FTZ 14B HIGHWAY 242 SOUTH WEST HELENA, ARKANSAS 72390**
(At customs port of exit or destination)
Foreign port of lading **LE HAYRE** B/L No. **TEPHILHLN30ND628** Date of sailing **5/17/97**
(Above information to be furnished only when merchandise is imported by vessel)
Imported on the **M/Y NUEVO LEON V. 30N** Flag **MX** on **6/7/97** via **DIRECT**
(Name of vessel or carrier and motive power) (Date imported) (Last foreign port)
Exported from **FRANCE** on **5/17/97** Goods now at **FOREIGN TRADE ZONE No. 2**
(Country) (Date) (Name of warehouse, station, pier, etc.)

Marks and Numbers of Packages	DESCRIPTION AND QUANTITY OF MERCHANDISE NUMBER AND KIND OF PACKAGES (Describe fully as per shipping papers)	GROSS WEIGHT IN POUNDS	VALUE (Dollars only)	RATE	DUTY
LOGU-943157-3	1 (20') TANK CONTAINER: 3,4-DICHLOROPHENYLISOCYANATE (3,4-DCPI) TOXIC LIQUID HAZARDOUS CARGO CLASS 6.1 UN 250 P.G. II SECURITY SHEET: 6.1 - 04 M.F.A.G. TABLE: 370 EMERGENCY TELEPHONE: (800) 424-9390 HTSIS 2929.10.3000 C/O FR NFE3 FRH0AGRI420LY0 ZONE-TO-ZONE TRANSFER NPF FROM FTZ #2 TO FTZ #14B FTZ #2 ADMISSION #23971	50265	100275	EST. NOT VERIFIED	

FTZ 14B
DIRECT DELIVERY PROGRAM
7-11-97
Bob Christie
SIGNATURE

G.O. No.

CERTIFICATE OF LADING FOR TRANSPORTATION IN BOND AND/OR LADING FOR EXPORTATION FOR **2006 MEMPHIS, TENNESSEE**
(Port)

WITH THE EXCEPTIONS NOTED ABOVE, THE WITHIN-DESCRIBED GOODS WERE:
Delivered to the Carrier named above, for delivery to the District Director of Customs at destination sealed with Customs seals
Laden on the—
(Vessel, vehicle, or aircraft)
which cleared for—
on (Date)
as verified by export records
(Inspector)
(Date)

I truly declare that the statements contained herein are true and correct to the best of my knowledge and belief.
Entered or withdrawn by **CEDAR CHEMICAL CORPORATION**
by **PHILBIN, CAZALAS & ST. JOHN, INC.**
Atty in fact *[Signature]*

To the Inspector or Warehouse Officer: The above-described goods shall be disposed of as specified herein.
For the District Director of Customs.
Received from the District Director of Customs of above district the merchandise described in this manifest for transportation and delivery into the custody of the customs officers at the port named above, all packages in apparent good order except as noted hereon.
TRIPLE E TRANSPORT
[Signature]
Attorney or Agent of Carrier

Consult customs officer or Part 18 Customs Regulations for the appropriate number of copies required for entry, withdrawal, or manifest purposes.

For the purpose of transfer under the cartage or lighterage provisions of a proper bond to the place of shipment from the port of entry, extra copies bearing a stamp or notation as to their intended use may be required for local administration.

As the form is the same whether used as an entry or withdrawal or manifest, all copies may be prepared at the same time by carbon process unless more than one vessel or vehicle is used in which case a separate set of manifest must be prepared for each such vessel or vehicle.

Whenever this form is used as an entry or withdrawal care should be taken that the kind of entry is plainly shown in the block in the upper right-hand corner of the face of the entry.

This form may be printed by private parties provided that the supply printed conforms to the official form in size, wording, arrangement, and quality and color of paper and ink. For sale by District Directors of Customs.

RECORD OF CARTAGE OR LIGHTERAGE

Delivered to Cartman or Lighterman in apparent good condition except as noted on this form

Table with columns: CONTAINEE, QUANTITY, DATE, DELIVERED, RECEIVED. Includes sub-columns for (Inspector of Warehouse Office) and (Cartman or Lighterman). Includes a 'RECEIVED' stamp area on the right.

CERTIFICATES OF TRANSFER (If required)

Two columns of text for certificates of transfer. Each column asks for 'by reason of', 'to', 'on', 'at', and 'sealed with' information. Includes a signature line for the Inspector.

If transfer occurs within city limits of a customs port or station, customs officers must be notified to supervise transfer.

INSPECTOR'S REPORT OF DISCHARGE AT DESTINATION

Port Station

TO THE DISTRICT DIRECTOR OF CUSTOMS - Delivering line Car No Initial

Arrived Condition of car of seals of packages

Table with columns: Date of Delivery by Importer or Carrier, PACKAGES, Serial Number of Entry or Entry Order, Vehicle License or Register No., CONDITIONS, ETC.

I certify above report is correct

Inspector

TOLOCHIMIE

ADRESSER VOTRE CORRESPONDANCE A :

TOLOCHIMIE - Impasse PALAYRÉ
B.P. 1196 - 31037 TOULOUSE CEDEX 1
TÉL. 05 61 31 78 78
TÉLÉCOPIE : 05 61 31 78 50

N / REF : MF / ML

DATE 13-Mai-97

CEDAR

COMMANDE N° 210127462
EXPEDITION N° 221
DU 13 Mai 97

CAMION CITERNE N°
CONTAINER N° dogu 943 157-3
WAGON N°

N° DE LOT DU PRODUIT B303A/13.5.97.5

N° DE LOT DU CONDITIONNEMENT
(s' il y a lieu)

CERTIFICAT D'ANALYSE DU 3,4-DICHLOROPHENYLISOCYANATE

Nous certifions que le produit ci-dessus a la composition suivante :

M E T H O D E	Détermination	Valeur	Unité	Spécification	Méthode d'analyse Tolochimie
1	aspect	conforme		solide blanc	Visuelle
2	3,4-dichlorophénylisocyanate	99.64	%	> 98.5	To 10.27.88
2	2,3-dichlorophénylisocyanate	0.25	%	pour information	To 10.27.88
2	3-chloro + 4-chlorophénylisocyanate	0	%	pour information	To 10.27.88
2	monochlorobenzène	0	%	< 0.2	To 10.27.88
2	semi-lourds	0.03	%	< 0.8	To 10.27.88
autre	isocyanate de chlorotolyle	0.08	%		
autre			%		

principe de la méthode:

1	visuelle
2	C.P.G
autre	
autre	

LE RESPONSABLE DU CONTROLE ANALYTIQUE



REF 97258
 Entry No. 23971
 NEW ORLEANS, LA.
 Date 6/11/97

TRANSPORTATION ENTRY AND MANIFEST OF
 GOODS SUBJECT TO CUSTOMS INSPECTION
 AND PERMIT

403
 Form Approved
 OMB No 1515-0047
 Entry No. 313, 651, 091
 Class of Entry I.T. (61)
 (I.T.) (Wd.T.) (Wd.Ex.) (T.E.) (Drawback) (R.C.)

UNITED STATES CUSTOMS SERVICE

Dist. No. 20 Port Code No. 02 First U.S. Port of Unloading NEW ORLEANS, LA.
 Port of NEW ORLEANS, LA. Date 7/9/97

Entered or imported by CEDAR CHEMICAL CORPORATION to be shipped
 in bond via TRIPLE E TRANSPORT BOND No. 209100312 consigned to
 District Director of Customs At 2006 MEMPHIS, TN Final foreign destination
 Consignee CEDAR CHEMICAL CORP. FTZ 14B HIGHWAY 242 SOUTH WEST HELENA, ARKANSAS 72390
 Foreign port of lading LE HAVRE B/L No. TEMILHMLN3QND628 Date of sailing 5/17/97
 Imported on the M/V NUEVO LEON Y. 30W Flag MX on 6/7/97 via DIRECT
 Exported from FRANCE on 5/17/97 Goods now at FOREIGN TRADE ZONE No. 2

Marks and Numbers or Packages	DESCRIPTION AND QUANTITY OF MERCHANDISE NUMBER AND KIND OF PACKAGES (Describe fully as per shipping papers)	GROSS WEIGHT IN POUNDS	VALUE (Dollars only)	RATE	DUTY
LOGN-943157-3	1 (20') TANK CONTAINER: 3,4-DICHLOROPHENYLISOCYANATE (3,4-DCPI) TOXIC LIQUID HAZARDOUS CARGO CLASS 6.1 UN 250 P.G. II SECURITY SHEET: 6.1 - 04 M.F.A.G. TABLE: 370 EMERGENCY TELEPHONE: (800) 424-9390 HTSUS 2929.10.3000 C/O FR MFG# FRRHOAGR1420LYO ZONE-TO-ZONE TRANSFER NPF FROM FTZ #2 TO FTZ #14B FTZ #2 ADMISSION #23971	50265	100275	EST. NOT VERIFIED	

G.O. No. _____
 CERTIFICATE OF LADING FOR TRANSPORTATION IN BOND
 AND/OR LADING FOR EXPORTATION FOR
 2006 MEMPHIS, TENNESSEE
 WITH THE EXCEPTIONS NOTED ABOVE, THE WITHIN-
 DESCRIBED GOODS WERE:
 Delivered to the Carrier named above, for delivery to the District Director of Customs at destination sealed with Customs seals
 Laden on the—
 (Vessel, vehicle, or aircraft)
 which cleared for—
 on _____
 (Date)
 as verified by export records.
 (Inspector)
 (Date)

I truly declare that the statements contained herein are true and correct to the best of my knowledge and belief.
 Entered or withdrawn by CEDAR CHEMICAL CORPORATION
 by PHILBIN, CAZALAS & STANMAN, INC.
 Atty. in fact
 To the Inspector or Warehouse Officer: The above-described goods shall be disposed of as specified herein.
 For the District Director of Customs.
 Received from the District Director of Customs of above stated the merchandise described in this manifest for transportation and delivery into the custody of the customs officers at the port named above, all packages in apparent good order except as noted hereon.
 TRIPLE E TRANSPORT
 Attorney or Agent of Carrier
 AB000018659



July 16, 1997

Mr. Bob Christian
Manager, Purchasing
Cedar Chemical Corporation
Post Office Box 2749
West Helena, Arkansas 72390

Dear Mr. Christian:

In accordance with Customs regulations pertaining to the responsibilities of the operator of the transferring zone, we are transmitting to the receiving subzone (FTZ 14B) the enclosed copies of the original custom forms 214 and 7512 as well as the shipping invoice.

The aforementioned documents which are enclosed, relate to the zone transfer of tank containers LOGU 943157-3 and SNIU 121003-2 covered by FTZ #2's zone lot number 23971 and I.T. numbers 313963694 and 313963720 respectively.

Sincerely,

A handwritten signature in dark ink, appearing to read "Baldwin van Benthuisen", is written over a horizontal line. The signature is fluid and cursive.

Baldwin van Benthuisen
Manager
Foreign Trade Zone #2

BVB:nr

Enclosures

ORIGINAL

RHONE-POULENC AGRO

14-20, RUE PIERRE BAIZET B P 9163
69263 LYON CEDEX 09 - FRANCE
TEL 04 72 85 25 25 - FAX 04 72 85 27 99
TLX 310 098 F RHONE
N° IDENTIFICATION TVA FR 53 969 503 309

INVOICE NO: 20115118 DATED: 27.05.1997
SIAT : 015 1191

CONSIGNEE: U. CHEM
CEDAR CHEMICAL CORPORATION
ATTN: BOB CHRISTIAN
HWY 24, SOUTH
AR 72390 WEST HELENA
UNITED STATES

INVOICEE: U. CHEM
CEDAR CHEMICAL CORPORATION
ATTN: BOB CHRISTIAN
P.O. BOX 807 2749
AR 72390 WEST HELENA
UNITED STATES

 D/PPT : 01 40127452 0010
 V/RCP : 405257
 SHIPPING BY :
 TERMS OF DELIVERY : CIF LUSI INS FREIG EOL : NEW ORLEANS
 TERMS OF PAYMENT : 90 DAYS INVOICE DATE
 PAYMENT DATE : 25.05.1997
 PAYMENT MODE : TELEGRAPHIC TRANSFER
 CURRENCY : USD

APPROX. QUANT : 185 TONNES SH N° : 2929190
 JUSTIFICATION NO : 314 012 012012
 QUANTITE : 39300.00 KG
 UNIT PRICE : 51.25 USD PER 1 TON
 MONTANT : 2014750.00 USD

REMISE :
 RHONE-POULENC AGRO
 14-20, RUE PIERRE BAIZET
 B.P. 9163
 69263 LYON CEDEX 09
 FRANCE

TOTAL TO BE PAID: 204.750,00 USD

OPERATION TVA ART. 262TER 1 DU CODE GENERAL DES IMPOTS

TELEGRAPHIC ADDRESS OF SWIFT TO SOCIETE GENERALE LYON BRANDES
 ENTREPRISES : ACCOUNT NUMBER 20109829
 THE SWIFT : SWIFT CODE FRFPVY LYON ENTREPRISES 02260

RHONE-POULENC
 SF AGRO
 14/20 Rue Pierre Baizet B.P. 9163
 69263 LYON CEDEX 09
 TEL 04 72 85 25 25 - FAX 04 72 85 27 99
 S.A. Capital 1 431 515 000 - R.C LYON 8 969 503 309

RAW MATERIAL RECEIVING RECORD

No. 10109

CEDAR CHEMICAL 9000-1 REV: C

TIME IN AT GATE
0830

RECEIVED BY
M. Sullivan

SECTION 1

DATE: 7-16-97 ORDER NO: n/a CAR OF TRUCK NO: SNIU 121003-2 DECLARED WEIGHT: Net n/a 41557

SHIPPER: *Hudson Gilbert* CARRIER: *Triple E*

QUANTITY	CONTAINER	DESTINATION	RAW MAT CODE #	DESCRIPTION
1	S/C	unit #2	40150	DCP1

COMMENTS: *Lab Has C.O.A.*

SECTION 2

RECIPIENT: *T. Nichols* TIME SAMPLE/CERTIFICATE TAKEN TO LAB: 0840

UNLOADED AT (tank number, unit, warehouse, etc.): *Dept. PAD*

COMMENTS:

SECTION 3

INSPECTOR: *TLP* ACCEPT: REJECT: REASON FOR REJECTION:

COMMENTS:

SECTION 4

INSPECTOR: *msid* ACCEPT: REJECT: REASON FOR REJECTION:

PLANT WEIGHT: NET *41.660* UNLOADING TIMES: START TIME: END TIME:

COMMENTS: *Trailer was logged with used as needed*

WEIGHED ON A FAIRBANKS SCALE

DATE

7/16/97

CUSTOMERS NAME

Cedon

ADDRESS

W. Helms Ash

COMMODITY

OCP

CARRIER

TRIPLE E

REMARKS

SN 114-121003-2

73860

08:26AM JL 16 97

56640
14980

LBS. GROSS

LBS. TARE - DRIVER ON OFF

17220

08:33AM JL 16 97

41660

LBS. NET @ PER LB. PRICE

56640 full cart only

SHIPPER

WEIGHER

FAIRBANKS SCALE CAT. 083905

WEIGHED ON A FAIRBANKS SCALE

DATE

7/30/97

CUSTOMERS NAME

Cedon Chemical

ADDRESS

26 Hwy 242 South

COMMODITY

OCP

CARRIER

REMARKS

32280

02:40PM JL 30 97

LBS. GROSS

LBS. TARE - DRIVER ON OFF

17300

02:29PM JL 30 97

LBS. NET @ PER LB. PRICE

14980

SHIPPER

WEIGHER

FAIRBANKS SCALE CAT. 083905

REF: 973273
 19 CFR 10.60, 10.61, 18, 123.41, 123.42

TRANSPORTATION ENTRY AND MANIFEST OF
 GOODS SUBJECT TO CUSTOMS INSPECTION
 AND PERMIT

Form Approved
 OMB No. 1515-0005

400

FTZ Entry No. **23971**
 Port **NEW ORLEANS, LA.**
 Date **6/11/97**

Entry No. **313,943,720**
 Class of Entry **I.T. (61)**
 (LT)(Wd.T.)(Wd.Ex.)(T.E.)(Drawback, etc.)

UNITED STATES CUSTOMS SERVICE

Dist. No. **20** Port Code No. **02** First U.S. Port of Unlading **NEW ORLEANS, LA.**
 Port of **NEW ORLEANS, LA.** Date **7/14/97**

Entered or imported by **CEDAR CHEMICAL CORPORATION** to be shipped
 in bond via **TRIPLE E TRANSPORT** BOND No. **209100312** consigned to
 (CHI Number) (Vessel or carrier) (Car number and initial) (Pier or station)
 District Director of Customs At **2006 MEMPHIS, TN** Final foreign destination
 Consignee **CEDAR CHEMICAL CORP. FTZ 14B HIGHWAY 242 SOUTH WEST MELENA, ARKANSAS 72390**
 (At customs port of exit or destination) (For exportations only)
 Foreign port of lading **LE HAVRE** B/L No. **TEPLHLE1300628** Date of sailing **5/17/97**
 (Above information to be furnished only when merchandise is imported by vessel)
 Imported on the **N/Y NUEVO LEON V. 30N** Flag **MX** on **6/7/97** via **DIRECT**
 (Name of vessel or carrier and motive power) (Date imported) (Last foreign port)
 Exported from **FRANCE** on **5/17/97** Goods now at **FOREIGN TRADE ZONE No. 2**
 (Country) (Date) (Name of warehouse, station, pier, etc.)

Marks and Numbers of Packages	DESCRIPTION AND QUANTITY OF MERCHANDISE NUMBER AND KIND OF PACKAGES (Describe fully as per shipping papers)	GROSS WEIGHT IN POUNDS	VALUE (Dollars only)	RATE	DUTY
NTU-121003-2	1 (20') TANK CONTAINER: 3,4-DICHLOROPHENYLISSOCYANATE (3,4-DCPI) TOXIC LIQUID HAZARDOUS CARGO CLASS 6.1 UN 2250 P.G. II SECURITY SHEET: 6.1 - 04 N.F.A.G. TABLE: 370 EMERGENCY TELEPHONE: (800) 424-9390 NTSUS 2929.10.3000 C/O FR MFG: FRM90GR1420LYO ZONE-TO-ZONE TRANSFER MPF FROM FTZ #2 TO FTZ #14B FTZ #2 ADMISSION #23971	48523	98962	EST. NOT VERIFIED	

FTZ 14B
 DIRECT DELIVERY PROGRAM
 7-16-97
Bob Christ
 SIGNATURE

G.O. No. _____

CERTIFICATE OF LADING FOR TRANSPORTATION IN BOND AND/OR LADING FOR EXPORTATION FOR **2006 MEMPHIS, TENNESSEE**

WITH THE EXCEPTIONS NOTED ABOVE, THE WITHIN-DESCRIBED GOODS WERE:
 Delivered to the Carrier named above, for delivery to the District Director of Customs at destination sealed with Customs seals

Laden on the—
 (Vessel, vehicle or aircraft)
 which cleared for—
 on _____ (Date)
 as verified by export records.

Nos. _____ or the packages (were) (were not) labeled, or corded and sealed.
 (Inspector or warehouse officer) _____ (Inspector) _____ (Date) _____ (Date) _____

I truly declare that the statements contained herein are true and correct to the best of my knowledge and belief

Entered or withdrawn by **CEDAR CHEMICAL CORPORATION**
 by **PHILBIN, CAZALAS & CO., INC.**
 Atty. in fact

To the Inspector or Warehouse Officer: The above-described goods shall be disposed of as specified herein

Received from the District Director of Customs of above district the merchandise described in this manifest for transportation and delivery into the custody of the customs officers at the port named above: all packages in apparent good order except as noted hereon.

TRIPLE E TRANSPORT
[Signature]
 Attorney or Agent of Carrier

REF: 973273
19 CFR 10.60, 10.81, 18, 123.41, 123.42

TRANSPORTATION ENTRY AND MANIFEST OF
GOODS SUBJECT TO CUSTOMS INSPECTION
AND PERMIT

Form Approved
OMB No 1515-0005

403

FTZ Entry No. **23971**
Port **NEW ORLEANS, LA.**
Date **6/11/97**

Entry No. **313,963,720**
Class of Entry **I.T. (61)**
(LT.)(Wd.T.)(Wd.Ex.)(T.E.)(Drawback, etc.)

UNITED STATES CUSTOMS SERVICE
Dist. No. **20** Port Code No. **02** First U.S. Port of Unlading **NEW ORLEANS, LA.**
Port of **NEW ORLEANS, LA.** Date **7/14/97**

Entered or imported by **CEDAR CHEMICAL CORPORATION** to be shipped
in bond via **TRIPLE E TRANSPORT** **BOND No. 209100312** consigned to
(C.I.T. Number) (Vessel or carrier) (Car number and initial) (Pier or station)
District Director of Customs At **2006 MEMPHIS, TN** Final foreign destination
(for exportations only)
Consignee **CEDAR CHEMICAL CORP. FTZ 14B HIGHWAY 242 SOUTH WEST HELENA, ARKANSAS 72390**
(At customs port of exit or destination)
Foreign port of lading **LE HAYRE** B/L No. **TEWAHLK30M628** Date of sailing **5/17/97**
(Above information to be furnished only when merchandise is imported by vessel)
Imported on the **M/Y NUEVO LEON V. 30M** Flag **MX** on **6/7/97** via **DIRECT**
(Name of vessel or carrier and motive power) (Date Imported) (Last foreign port)
Exported from **FRANCE** on **5/17/97** Goods now at **FOREIGN TRADE ZONE No. 2**
(Country) (Date) (Name of warehouse, station, pier, etc.)

MARKS AND NUMBERS OF PACKAGES	DESCRIPTION AND QUANTITY OF MERCHANDISE NUMBER AND KIND OF PACKAGES (Describe fully as per shipping papers)	GROSS WEIGHT IN POUNDS	VALUE (Dollars only)	RATE	DUTY
SNIU-121003-2 20	1 (20') TANK CONTAINER: 3,4-DICHLOROPHENYLISOCYANATE (3,4-DCPI) TOXIC LIQUID HAZARDOUS CARGO CLASS 6.1 UN 2250 P.G. II SECURITY SHEET: 6.1 - 04 M.F.A.G. TABLE: 370 EMERGENCY TELEPHONE: (800) 424-9390 HTSUS 2929.10.3000 C/O FR NFG: FRHOAGRI420LYO ZONE-TO-ZONE TRANSFER NPF FROM FTZ #2 TO FTZ #14B FTZ #2 ADMISSION #23971	48523	98962	EST. NOT VERIFIED	

FTZ 14B
DIRECT DELIVERY PROGRAM
7-16-97
Bob Chilton
SIGNATURE

G.O. No.
CERTIFICATE OF LADING FOR TRANSPORTATION IN BOND
AND/OR LADING FOR EXPORTATION FOR
2006 MEMPHIS, TENNESSEE
(Port)
WITH THE EXCEPTIONS NOTED ABOVE, THE WITHIN-
DESCRIBED GOODS WERE:
Delivered to the Carrier named above, for delivery to the District Director of Customs at destination sealed with Customs seals
Laden on the—
(vessel, vehicle, or aircraft)
which cleared for—
on
(Date)
as verified by export records.
(Inspector)
(Date)

I truly declare that the statements contained herein are true and correct to the best of my knowledge and belief
Entered or withdrawn by **CEDAR CHEMICAL CORPORATION**
by **PHILBIN, CAZALAS & ST. JOHN, INC.**
Atty. in fact
To the Inspector or Warehouse Officer, the above-described goods shall be disposed of as specified herein.
For the District Director of Customs.
Received from the District Director of Customs of above district the merchandise described in this manifest for transportation and delivery into the custody of the customs officers at the port named above, all packages in apparent good order except as noted hereon
TRIPLE E TRANSPORT
Attorney or Agent of Carrier

403

**TRANSPORTATION ENTRY AND MANIFEST OF
GOODS SUBJECT TO CUSTOMS INSPECTION
AND PERMIT**

UNITED STATES CUSTOMS SERVICE

Entry No. **23971**
 Port **NEW ORLEANS, LA.**
 Date **6/11/97**

Entry No. **313, 000, 000**
 Class of Entry **L.T. (61)**
 (L.T.) (W.L.T.) (W.L.E.) (T.E.) (T.W.L.E.) (E.L.)

Dist. No. **20** Port Code No. **02** First U.S. Port of Unlading **NEW ORLEANS, LA.**
 Port of **NEW ORLEANS, LA.** Date **7/14/97**

Entered or imported by **CEDAR CHEMICAL CORPORATION** to be shipped
 in bond via **TRIPLE E TRANSPORT** BOND No. **209100312** consigned to
 District Director of Customs At **2006 MEMPHIS, TN** Final foreign destination
 Consignee **CEDAR CHEMICAL CORP. FTZ 14B HIGHWAY 242 SOUTH WEST HELENA, ARKANSAS 72390**
 Foreign port of lading **LE HAYRE** B/L No. **TEMULHML30M0628** Date of sailing **5/17/97**
 Imported on the **N/Y NUEVO LEON V.30M** Flag **MX** on **6/7/97** via **DIRECT**
 Exported from **FRANCE** on **5/17/97** Goods now at **FOREIGN TRADE ZONE No. 2**

MARKS AND NUMBERS OF PACKAGES	DESCRIPTION AND QUANTITY OF MERCHANDISE NUMBER AND KIND OF PACKAGES (Describe fully as per shipping papers)	GROSS WEIGHT IN POUNDS	VALUE (Dollars only)	RATE	DUTY
NID-121003-2	1 (20') TANK CONTAINER: 3,4-DICHLOROPHENYLISOCYANATE (3,4-DCPI) TOXIC LIQUID HAZARDOUS CARGO CLASS 6.1 UN 2250 P.G. II SECURITY SHEET: 6.1 - 04 N.F.A.G. TABLE: 370 EMERGENCY TELEPHONE: (800) 424-9390 HTSUS 2929.10.3000 C/O FR NFB: FRRKQARI420LYO ZONE-TO-ZONE TRANSFER NPF FROM FTZ #2 TO FTZ #14B FTZ #2 ADMISSION #23971	48523	98962	EST.	NOT VERIFIED

G.O. No. _____

CERTIFICATE OF LADING FOR TRANSPORTATION IN BOND AND/OR LADING FOR EXPORTATION FOR

2006 MEMPHIS, TENNESSEE

WITH THE EXCEPTIONS NOTED ABOVE, THE WITHIN-DESCRIBED GOODS WERE:

Delivered to the Carrier named above, for delivery to the District Director of Customs at destination sealed with Customs seals

Laden on the _____ (Vessel, vehicle, or aircraft)

which cleared for _____

on _____ (Date)

as verified by export records.

(Inspector) _____ (Date) _____

I truly declare that the statements contained herein are true and correct to the best of my knowledge and belief.

Entered or withdrawn by **CEDAR CHEMICAL CORPORATION**
 by **PHILBIN, CAZALAS & STUBBS, LLP**
 Atty. in fact _____

To the Inspector or Warehouse Officer: the above-described goods shall be disposed of as specified herein.

Received from the District Director of Customs of above district the merchandise described in this manifest for transportation and delivery into the custody of the customs officers at the port named above, all packages in apparent good order except as noted hereon.

TRIPLE E TRANSPORT
 Attorney or Agent of Carrier

TOLOCHIMIE

ADRESSER VOTRE CORRESPONDANCE A :

TOLOCHIMIE - Impasse PALAYRÉ
B.P. 1196 - 31037 TOULOUSE CEDEX 1
TÉL : 05 61 31 78 78
TÉLÉCOPIE : 05 61 31 78 50

N / REF : MF /ML

DATE 13-Mai-97

CEDAR

COMMANDE N° 401 27462
EXPEDITION N° 419
DU 13 Mai 97

CAMION CITERNE N°
CONTAINER N° SNU 121003.2
WAGON N°

N° DE LOT DU PRODUIT B303A/13.5.97.5

N° DE LOT DU CONDITIONNEMENT

(s' il y a lieu)

CERTIFICAT D'ANALYSE DU 3,4-DICHLOROPHENYLISOCYANATE

Nous certifions que le produit ci-dessus a la composition suivante :

M E T H O D E	Détermination	Valeur	Unité	Spécification	Méthode d'analyse Tolochimie
1	aspect	conforme		ecide blanc	Visuelle
2	3,4-dichlorophénylisocyanate	99.64	%	> 98.5	To 10.27.88
2	2,3-dichlorophénylisocyanate	0.25	%	pour information	To 10.27.88
2	3-chloro+ 4-chlorophénylisocyanate	0	%	pour information	To 10.27.88
2	monochlorobenzène	0	%	< 0.2	To 10.27.88
2	semi-lourds	0.03	%	< 0.8	To 10.27.88
autre	isocyanate de chlorotolyle	0.08	%		
autre			%		

principe de la méthode:

1	visuelle
2	C.P.G
autre	
autre	

LE RESPONSABLE DU CONTROLE ANALYTIQUE



ORIGINAL

RHONE-POULENC AGRO

14-20, RUE PIERRE BAIZET B P 9163
 69263 LYON CEDEX 09 - FRANCE
 TEL 04 72 85 25 25 - FAX 04 72 85 27 99
 TLX 310 088 F RHONE
 N° IDENTIFICATION TVA FR 53 969 503 309

INVOICE NO: 40115118 DATED: 27.05.1997
 SHIP : 055 - 1791

CONSIGNEE: CEFER
 CEFER CHEMICAL CORPORATION
 ATTN: 808 CHRISTIAN
 HWY 242 SOUTH
 AR 72390 WEST HELENA
 UNITED STATES

INVOICEE: CEFER
 CEFER CHEMICAL CORPORATION
 ATTN: 808 CHRISTIAN
 P.O. BOX 808 2749
 AR 72390 WEST HELENA
 UNITED STATES

DIFF : 01 40127402 3010
 V-REP : 04050577
 SHIPPING BY :
 TERMS OF DELIVERY : CIF - COST INS FREIGHT
 TERMS OF PAYMENT : 30 DAYS INVOICE DATE
 PAYMENT DATE : 25.06.1997
 PAYMENT MODE : TELEGRAPHIC TRANSFER
 CURRENCY : USD

EUR : NEW ORLEANS

PRODUIT CODE : 185764011
 TECHNICAL NO : 3.4 DAPI GYPER 12
 QUANTITE : 29000 KG
 UNIT PRICE : 5.25 USD PER 1 KG
 AMOUNT : 152250.00 USD

SN N° : 29291090

RHONE-POULENC AGRO
 14-20 RUE PIERRE BAIZET
 69263 LYON CEDEX 09
 FRANCE

TOTAL TO BE PAID

204.750.00 USD

EXONERATION TVA ART. 262TER 1 DU CODE GENERAL DES IMPOTS

TELEGRAPHIC TRANSFER OR SWIFT TO SOCIETE GENERALE LYON FRANCE
 ENTREPRISES : ACCOUNT NUMBER 78010928
 SWIFT : SWIFT 2236 FFPLYP LYON ENTREPRISES 0228

RHONE-POULENC
 SI RHONE-POULENC AGRO
 14/20 RUE PIERRE BAIZET B.P. 9163
 69263 LYON CEDEX 09
 TEL 04 72 85 25 25 - FAX 04 72 85 27 99
 SA Capital 1 431 515 000 - RC LYON B 969 503 309

Please File

SECRECY AGREEMENT

This Agreement is made and entered as of the date last below written by and between:

Rhône-Poulenc Agro Matières Actives, a French "société en nom collectif" with a capital of 640 250 000 French Francs with its registered office at 14/20, rue Pierre Baizet - 69009 LYON - FRANCE, registered in Lyon under number B 399 135 532,

Represented by Mr Hans MOSER, Strategic Purchasing Director, Business Development,

Hereinafter referred to as "RPAMA",

as the first Party,

And

Cedar Chemical Corporation, a company duly organised under --- law with offices at 5100 POPLAR Avenue, MEMPHIS, TN 38137 USA,

Represented by Mr Geoffrey L. PRATT, Vice President

Hereinafter referred to as "CEDAR",

as the second Party,

Witnesseth:

- ◆ WHEREAS, RPAMA and CEDAR have entered into a certain Secrey Agreement dated as of May 14th, 1999 in relation to the exchange of technical and proprietary information of a confidential nature, including manufacturing and formulation know-how for the manufacture and formulation of Cyclanilide or CS-DCA;
- ◆ WHEREAS, pursuant to a certain Patent and Technical License Agreement dated July 12th, 1999 RPAMA has obtained the right from DEGUSSA-HÜLS to divulge certain valuable technical and proprietary information of a confidential nature of DEGUSSA-HÜLS origin relating to the production of CS-DCA (hereinafter referred to as "the DEGUSSA-HÜLS Confidential Information") to RPAMA's toll manufacturers provided such toll manufacturers agree to be bound by the confidentiality and non-use obligations under the Patent and Technical License Agreement;

h.

- ◆ WHEREAS, RPAMA and CEDAR are interested in exchanging the DEGUSSA-HÜLS Confidential Information for the purpose of evaluating their interest to enter into a toll manufacturing or purchase agreement, or any similar agreement, of CS-DCA (hereinafter "the Purpose").

NOW, THEREFORE, in consideration of the premises and the terms and conditions herein contained the Parties have agreed as follows:

Clause 1. DEFINITIONS

"Affiliate(s)" means any entity that directly or indirectly, through one or more intermediaries, now or hereafter controls or is controlled by or is under common control with a Party hereto, except in countries where ownership of a majority or controlling interest by a foreign entity is not permitted by law, rule or regulations, the parent's direct or indirect voting interest may be less than a majority or controlling interest.

"Control" (including the terms "controls", "controlled by", "controlling" and "under common control with") are understood as meaning the possession, direct or indirect, of the power to direct or cause the direction of the management and policies of a person or entity whether through the ownership of voting security, by contract or otherwise.

"CEDAR" means CEDAR and its Affiliates.

"DEGUSSA-HÜLS" means DEGUSSA-HÜLS and its Affiliates.

"RPAMA" means RPAMA and its Affiliates.

"Third Party" means any Party other than RPAMA, CEDAR, DEGUSSA-HÜLS and/or their Affiliates.

Clause 2. SECRECY

2.1. During the term of this Agreement, CEDAR agrees to hold in trust and confidence and not to disclose to any Third Party, nor to use for its own purposes other than the toll manufacture of CS-DCA for and on behalf of RPAMA any and all of the DEGUSSA-HÜLS Confidential Information disclosed to it by RPAMA under this Agreement.

- 2.2. CEDAR agrees to make available such DEGUSSA-HÜLS Confidential Information only to those of its employees who need to have access to it to carry out the toll manufacture of CS-DCA and shall cause such employees to be bound by the confidentiality and non-use obligations provided herein.
- 2.3. CEDAR shall be responsible for any breach of the confidentiality and non-use obligations provided herein by such employees, whether or not such employees continue to be employees of CEDAR.
- 2.4. CEDAR agrees to return promptly, free of charge, all of the DEGUSSA-HÜLS Confidential Information which is in written form to RPAMA at any time, upon RPAMA's request.
- 2.5. Any documents, drawings, electronic media and other material containing any part of the DEGUSSA-HÜLS Confidential Information shall be destroyed by shredding into pieces or returned to RPAMA upon expiration or termination of this Agreement.
- 2.6. CEDAR's obligations of non-disclosure does not apply to such information and document, which:
 - at the time of the disclosure are generally available to the public; or
 - after disclosure become generally available to the public through no fault of CEDAR; or
 - CEDAR can prove to have been in its lawful possession at the time of disclosure by RPAMA.

Clause 3. LIMITATION OF RIGHT

Nothing herein contained shall be construed as granting to a Party any right, including any license, either express or implied, under any Confidential Information disclosed to a Party by another Party hereunder, except for a license to use the Confidential Information to conduct the evaluation as contemplated by the Agreement.

L.

Clause 4. DURATION

This Agreement shall become effective as from the date of its last signature by the parties hereto. Unless terminated earlier or otherwise extended by mutual agreement in writing, this Agreement shall terminate one (1) year later, except for the confidentiality obligations set forth in Clause 2 which shall survive termination or expiration of this Agreement for a period of five (5) years following termination or expiration under article 6.1 of the Patent and Technical License Agreement dated July 12th, 1999 between RPAMA and DEGUSSA-HÜLS.

Clause 5. AMENDMENT

No amendment or consensual cancellation of this Agreement or any provisions or terms thereof and no extension of time or waiver or relaxation or suspension of any of the provisions or terms of this Agreement shall be binding unless recorded in a written document signed by the Parties. Any such extension, waiver or relaxation or suspension which is so given or made shall be strictly construed as relating to the matter in respect whereof it was made or given.

Clause 6. ENTIRETY

This Agreement contains the entire understanding between the Parties hereto regarding the subject matter hereof, and cancels and supersedes all previous agreements, representations and understandings, written or oral between the Parties hereto regarding the subject matter hereof.

Clause 7. ASSIGNMENT

The rights and obligations of this Agreement cannot be assigned to a Third Party by a Party without the prior written consent of the other Party.

Clause 8. APPLICABLE LAW

This Agreement shall be interpreted and construed in accordance with, and its performance shall be governed by French law.

IN WITNESS WHEREOF, the Parties hereto have caused this Agreement to be duly executed as of the day and year last below written.

Rhône-Poulenc Agro Matières Actives



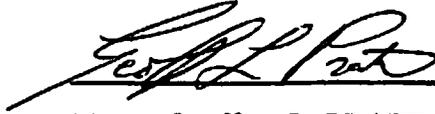
Name: Hans MOSER

Title: Strategic Purchasing Director,

Business Development

Date: 12.14. 99

Cedar Chemicals Corporation



Name: Geoffrey L. PRATT

Title: Vice President

Date: November 22, 1999.

Aventis CropScience



Serge RAVET
Strategic Sourcing Manufacturing Operations
Toll Manufacturing Manager
☎: (33) 4 72 65 29 20 - Fax: (33) 4 72 65 29 68

CEDAR
To the attention of Mr G. PRATT

Fax : (1) 901 684 5398

SR/FB - 002.00

Page(s) : 3

January 10, 2000

File

SUBJECT : MoU CYCLANILIDE

*CC Jim Rump
Kevin Payne*

Dear Geoffrey,

You will find herewith comments on the MoU, this document is still reviewed by our legal department but it seems important we progress on the points indicated below :

- Replacement of CPDM by CDM in the denomination of Cyclopopan 1,1 Dicarboxylic Acid Dimethyl Ether, (as it is in the Secrecy Agreement).
- Replacement of the wording "Definitive Agreement" by "Agreement".

• **2C Product :**

I remind that the estimate of our needs for the 3 next campaigns are the following :

- 1st Campaign = product available end of december 2000
- 2nd Campaign = product available end of may 2001
- 3rd Campaign = product available end of may 2002

The first campaign is sustained to the obtention of the right of importation of CDM in the US, thus it could be possible we have two campaigns in the first contract year.

Therefore, I propose that the volume of the third contract year should be the difference between 420 Metric Tons and the cumulated volume of the 2 previous contract years.

The minimum volume after the third contract year should not be precised.

- **2D Scheduling :**
R.P. will provide Cedar with an estimate one year before Product is required and these figures will be adjusted 3 months before the Campaign.

- **2E Raw Material Usage :**
For the avoidance of any doubt.
The saving under consumption of raw materials below - 3,5 % shall be shared equally.

- **2H Waste Disposal :**
As we have now an estimation now of the waste disposal I propose :
Replacement of "Cost of waste disposal shall be for Rhône-Poulenc" by "the cost of waste disposal charge to R.P. cannot exceed 1,1 \$/ Kg of product".

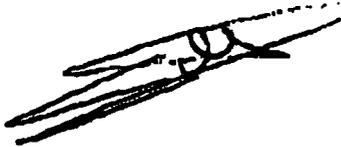
- **2I Toll Fee :**
To be clarified :
 - The fee of 6,5 \$/ Kg applies on all the volume of production if the produced volume is above 200 Metric Tons in a contracted year.
 - The index of reference for an escalation formula.For the avoidance of doubt, to be precised that this toll fee has already included the amortization of the capital improvement of paragraph 2F.

- **3 Schedule of target Date :**
3C Maintain April 1, RP to deliver a first draft of an Agreement.

- **Additional clauses to be added :**
 - a secrecy clause specific to the MoU.
 - a new paragraph at the end of the document to provide for the assignment or transfert to the MoU or the Definitive agreement as the case may be to any entity which may be a successor in interest to Rhône-Poulenc.
 - a new clause to provide for the settlement of disputes arising out in relation to this MoU.

Please don't hesitate to call me if you need some details on these points.

Best regards,



**Serge RAVET
Toll Manufacturing Manager**

CHARLES MITCHELL CRUMP
 ALLEN T. MALONE
 PHILIP G. WADSWORTH
 ROBERT L. BURROUGHS
 HENRY L. KUHN
 ROBERT J. PINSTEIN
 JOHN L. RYDER
 THOMAS R. BUCKNER
 BRUCE M. SMITH
 TONI CAMPBELL, BARBER
 STEVEN N. DEBLAGE
 ELLIAM NEEL, JR.
 RANDY S. SANDERSON
 LYDIA B. SCHALL
 DAVID R. FRIEDBERG
 RICHARD J. NIERER
 THOMAS M. TWIGG
 ALLISON T. GILBERT
 ANGELA A. GAVES
 SHAWN A. TIERRELL

*ALSO ADMITTED IN MISSISSIPPI
 *ALSO ADMITTED IN DISTRICT OF COLUMBIA

LAW OFFICES
APPERSON, CRUMP & MAXWELL, PLC

SUITE 2110
 ONE COMMERCE SQUARE
 MEMPHIS, TENNESSEE 38103-2610
 901 / 525-1711

FACSIMILE 901 / 521-0788

File
Ch. W. W. W.
 March 3, 2000

EAST OFFICE:

SUITE 100
 1798 WARD PARKWAY
 MEMPHIS, TENNESSEE 38120-4378
 901 / 758-0300
 FACSIMILE 901 / 757-1886

CHARLES W. MITCHELL, 1940-1984
 WILLIAM R. MITCHELL, 1972-1980
 JOHN W. APPERSON, 1935-1980

OF COUNSEL:
 JOHN B. MAXWELL, JR.
 JACKSON, SHIELDS,
 YEISER & CANTRELL

VIA FAX

Mr. Geoffrey L. Pratt
 Vice President
 Cedar Chemical Corporation
 24th Floor, Clark Tower
 5100 Poplar Avenue
 Memphis, TN 38137

Re: Proposed Rhone-Poulenc Agreement

Dear Geoff:

Enclosed is a new version of the Memorandum of Understanding which incorporates some of the new concepts inserted in Rhone-Poulenc's draft, but reinserts many of the substantive provisions which Rhone-Poulenc deleted. The reinserted terms (some of which I have revised slightly from our initial draft) include:

- Except for the eighty (80) ton campaign to be initiated in the fourth quarter of the year 2000, production campaigns will be for no less than one hundred fifty (150) metric tons and there will be no more than one production campaign in each Contract Year.
- The cost of the Capital Improvements would be amortized, and effectively reimbursed by Rhone-Poulenc, over the initial four hundred twenty (420) metric tons of Product purchased by it, but in any event, twenty percent (20%) of the Capital Improvements must be reimbursed by the end of the First Contract Year and an additional forty percent (40%) by the end of the Second Contract Year and the balance by the end of the Third Contract Year.

APPERSON, CRUMP & MAXWELL, PLC

**Mr. Geoffrey L. Pratt
March 3, 2000
Page Two**

- **The toll fees will not be reduced by the amount of the "amortization fee" after four hundred twenty (420) metric tons have been purchased (a point that Rhone-Poulenc seems to be confused about).**
- **I pushed up the original deadlines under Article 3 to March 15, 2000.**
- **Any Capital Improvement costs incurred by Cedar following execution of the Memorandum of Understanding are for Rhone-Poulenc's account.**

I could underscore the clauses which we either reinserted or, otherwise, revised which represent the principal difference between Rhone-Poulenc's latest draft and the enclosure. I would suggest, however, that you submit a clean draft and describe the principal differences in your letter that accompanies the draft.

Sincerely yours,



Allen T. Malone *by CA*

**ATM:cs
Enclosure**



File

To: Serge Ravet Fax: 9-011-33-4-72-85-2066

From: Geoff Pratt Date: 03/07/00

Re: MOU Cyclanilide Pages: 11

Phone: 901-684-5373 Cc: Randal Tomblin

Joe Mancini

Chris McGee

Allen Malone

Urgent For Review Please Comment Please Reply Please Recycle

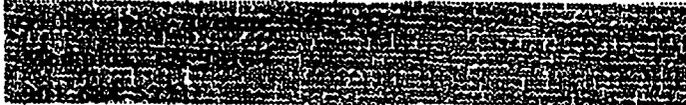
Dear Serge,

Offering comments on your fax of February 11, 2000 regarding the

Your proposal is acceptable for all paragraphs up to and including article 2A. We note that you have extended the term from 3 years to roughly 3.5 years but this probably will not affect the timing of revenue to Cedar significantly.

In articles 2A, B, C, F, I and 3B you have changed the business terms significantly, all to your advantage. The business terms were clearly defined and agreed to in our meeting of October 13, 1999. At that time Cedar compromised between our normal and reasonable charges in the spirit of meeting your cost requirements. Your latest proposed language requires Cedar to invest over 1 million dollars and reserve our plant for you with no commitment from Aventis for quantity of product or timing. I do not believe that you would agree to such a proposal if our roles were reversed. Let us please get back to the original business agreement so that project can move forward.

Cedar Chemical Corporation



I would remind you of the basis for our original agreement:

Cedar's economics are based upon your statement that volumes would be 80MT in year 1, 160MT in year 2, 180MT in year 3.
Cedar's pricing is: \$8.00/ kg for the first campaign, which is expected to be 80MT, \$7 / kg for subsequent campaigns between 150-200 MT, and \$6.5 / kg for campaigns over 200 MT. These campaign lengths were priced in response to your request. These campaigns are to be continuous. If you anticipate that campaigns will be shorter then Cedar will estimate pricing for shorter campaigns.
Let us assume that Cedar spends funds for detailed design of the plant modifications and for the additional equipment required. If Aventis cancels the project for any reason Cedar will have to absorb the cost with no hope of return. We are prepared to absorb as the cost of doing business, expenditures associated with the generation of business, and preparing preliminary design packages and quotations. Expenditures for detailed engineering and equipment, which need to begin soon, will not begin if you cannot agree to cover costs if the project is stoppage is terminated by Aventis prior to startup.

After startup Cedar can earn a reasonable return on the capital investment only if Aventis takes the 420MT that you told us you wanted. All of the economics were based on the volume and timing projection provided by you. However, we recognizes that you cannot predict the future and Cedar is prepared to share the risk by not requiring a take or pay contract for the product. We must partially protect ourselves by requiring that the capital cost be returned to us if, for no fault of Cedar's, less than the amount of product upon which the economics were based is purchased. We use the amortization method to accomplish this. We divide the capital cost by the number of product units upon which the economics are based, in this case 420,000kgs. Aventis will pay amortization only on the difference between the amount of product you take and 420MT. The last sentence of article 2C provides insufficient protection for Cedar. If you take very little product in the previous contract years Cedar would have to wait over three years to get most of the capital returned.
Your assumption that the fees will be reduced by the amortization amount when the 420 MT is taken is not valid. The fees do not include the amortization amount. If they did Cedar would show no profit on the project. The fees do include depreciation of the capital over 10 years.

Articles 2D, E, G, H, J, 3A, C, D, 4, 5, 6 are ok.

Attached is a new MOU which contains our thoughts on dealing with the above issues. We must reach agreement on these business issues soon or the project will be delayed. It does not make sense to begin preparation of a contract until the business basis is agreed upon. Please let me have your thoughts on how to resolve these differences.

Regards,

Geoff Pratt



Aventis

**Memorandum of Understanding - Cyclanilide
Dated September 1, 2000**

Aventis CropScience



CEDAR
Mr Geoffrey L. PRATT
5100 Poplar Ave.
Suite 2414
Memphis, TN 38137
UNITED STATES

September 1, 2000

Réf : fb/SR 108.00

CONFIDENTIAL

SUBJECT : MOU OF CYCLANILIDE

Dear Geoffrey,

Please find enclosed two originals of the MoU which have been signed by Hans Moser on behalf of Aventis CropScience.

Thank you for your cooperation.

Best Regards.

P/0 

Serge RAVET
Toll manufacturing manager

MEMORANDUM OF UNDERSTANDING

THIS MEMORANDUM OF UNDERSTANDING is made and entered into as of the date last below written (the "Effective Date"), by and between

Cedar Chemical Corporation, a Delaware corporation, having its principal place of business at Suite 2414 Clark Tower, 5100 Poplar Avenue, Memphis, Tennessee 38137 (hereinafter referred to as "CEDAR"),

and

Aventis CropScience Matières Actives, a French "société en nom collectif" having its registered office at 14/20, rue Pierre Baizet, 69009 LYON, France (hereinafter referred to as "Aventis").

Witnesseth:

- ◆ WHEREAS, Aventis desires to retain an independent third party contractor to toll manufacture for it Cyclanilide (1-(2,4-dichlorophenyliminocarbonyl)-cyclopropane carboxylic acid) (hereinafter "Product") from 2,4 DCA (2,4 Dichloro aniline) (hereinafter "DCA") and (cyclopropane- 1,1-dicarboxylic acid dimethyl ether (CPDM) (hereinafter "CPDM"), DCA and CPDM together with Sodium Methoxide (hereinafter "NaMO") being sometimes referred collectively herein as the "Raw Materials"; and
- ◆ WHEREAS, CEDAR owns and operates a chemical manufacturing facility located at West Helena, Arkansas which, following installation of certain capital improvements and equipment (the "Capital Improvements"), is deemed capable of producing Product from DCA and CPDM utilizing Aventis' manufacturing process (the "Process") disclosed by Aventis to Cedar pursuant to a Secrecy Agreement between Aventis and Cedar dated as of May 14, 1999 (the "Secrecy Agreement"); and processes disclosed to Cedar pursuant to a Secrecy Agreement between Aventis and Cedar dated as of November 22, 1999 (the "Degussa Secrecy Agreement").
- ◆ WHEREAS, it is agreed that CEDAR and Aventis shall promptly commence negotiations with each other in good faith with the intent of reaching an agreement (the "Agreement") satisfactory in form and substance to their respective managements and incorporating the terms and principles set forth herein.

NOW, THEREFORE, in consideration of the premises and the terms and conditions herein contained, the Parties agree as follows:

Article 1 - Purpose. The purpose of this Memorandum of Understanding is to set forth the terms and principles under which the parties will negotiate in good faith with the objective of entering into a toll manufacturing and supply Agreement whereby Cedar will produce Product for Aventis, and under which Cedar will initiate engineering studies and make equipment purchase commitments to enable it to construct and complete the Capital Improvements in time to begin producing Product for Aventis in the fourth quarter of the year 2000 in the quantities and in accordance with the terms and conditions set forth herein.

Article 2 - Agreement. The parties intend to negotiate in good faith with the objective of entering into an Agreement which will include among other terms, the following provisions:

A. **Term.** The initial term (the "Initial Term") shall be from the date of execution of the Agreement through December 31, 2006. Thereafter, the term of the Agreement shall be renewed for successive two year periods unless terminated by either party upon notice to the other not less than one (1) year prior to the end of the Initial Term or one year prior to the end of any extension of the Initial Term of Agreement; provided that the Agreement shall not be so extended unless, prior to the end of the Initial Term or of any extended term, the parties will have negotiated and reached mutual agreement in respect of the terms of such extension (including the price and quantity).

B. **Raw Materials.** Aventis shall be responsible for supplying Cedar, at its cost, the Raw Materials in sufficient quantities to enable Cedar to produce, in campaigns scheduled in accordance with the provisions of Article 2D, all quantities of Product ordered by Aventis, provided that in the event Cedar is able to obtain a more favorable price than Aventis for purchase of NaMO, following prior approval from Aventis, Cedar shall purchase such quantities of NaMO as shall be required for it to perform hereunder, but for the account of Aventis. Cedar shall supply, at its cost, all raw materials other than the Raw Materials and Aventis shall reimburse Cedar its actual cost for the purchase of such raw materials within thirty (30) days following the date of Cedar's invoice, provided that Cedar shall in all cases employ a reasonable competitive purchasing process. Cedar shall reimburse Aventis for all of Aventis' costs in supplying Raw Materials to Cedar, if such Raw Materials are used by Cedar to produce Product, which due to Cedar's negligence or failure to follow Aventis' process, does not meet the specifications set forth in Appendix A.

C. **Product.** Aventis shall order and Cedar shall produce from Raw Materials supplied by Aventis not less than seven hundred ninety (790) metric tons of Product during the Initial Term of the Agreement. For indicative purposes, Aventis' current estimate of its yearly requirements for the Product is one hundred fifty (150) metric tons per year, provided that such figure is provided for information purposes only and will not be binding.

Aventis shall order and purchase eighty (80) metric tons of Product from Cedar by December 31, 2000, and shall order and purchase one hundred fifty (150) metric tons of Product from Cedar by December 31, 2001.

In the event Aventis shall not have ordered and purchased from Cedar pursuant to the Agreement, at least one hundred and twelve (112) metric tons of Product during 2002 and in each calendar year of the Initial Term thereafter, then Aventis shall pay an amount equal to \$8.00 multiplied by the difference between the amount of Product ordered and purchased and one hundred and twelve (112) metric tons, provided however, that any such amounts paid by Aventis will be credited as a prepayment for any Product to be delivered in the following calendar year of the Initial Term in excess of one hundred and twelve (112) metric tons.

If during 2002 or any calendar year of the Initial Term thereafter, Aventis orders and purchases an amount of Product which exceeds one hundred and twelve (112) metric tons, such excess shall be credited towards, and shall thereby reduce, Aventis' commitment in respect of the one hundred and twelve (112) metric tons of Product for the following calendar year of the Initial Term, provided that the credit will be limited to twenty-eight (28) metric tons.

D. **Scheduling**. Aventis shall submit its good faith estimate of its orders for Product to be produced by Cedar in each calendar year during the term of the Agreement by no later than July 1 of the previous calendar year, provided that such estimate will be for the purpose of facilitating scheduling of manufacture only and will not be binding, provided that a firm order will be issued by Aventis by October 31 of such year, which order shall specify the delivery date(s) for the Product.

E. **Raw Material Usage**. Maximum usage factors applicable to consumption of Raw Materials (expressed in kilograms of Raw Materials consumed per kilogram of Product) shall be determined based on actual results achieved during the first industrial production of Product by Cedar. Thereafter, any over-consumption of Raw Materials (of more than 3.5%) shall be for Cedar's account. The savings on any under-consumption of Raw Materials of more than 3.5% shall be shared equally by the parties.

F. **Capital Improvements**. Cedar's cost of Capital Improvements shall be amortized over the first seven hundred ninety (790) metric tons of Product to be produced by Cedar and paid for by Aventis during the Initial Term of the Agreement. For example, if the agreed cost of the Capital Improvements for which Aventis shall be responsible is \$750,000.00, \$ 0.95 for each kilogram of Product purchased by Aventis from Cedar hereunder shall be credited to Aventis' obligation to reimburse Cedar's cost of Capital Improvements. If Cedar has not been totally reimbursed for the agreed cost of the Capital Improvements by December 31, 2006, Aventis shall be responsible for reimbursing Cedar the balance of its costs of Capital Improvements set forth in Appendix B by December 31, 2006.

G. **Startup**. Aventis shall provide reasonable technical assistance to Cedar during startup of the initial campaign.

H. **Waste Disposal.** The parties shall cooperate to determine the most cost effective and environmentally sound method to dispose of wastes generated by production of Product. Costs of waste disposal shall be for Aventis' account, provided that the cost of the waste disposal charge to Aventis shall not exceed \$ 1.25 per kilogram of Product.

I. **Toll Fees.** Cedar's toll manufacturing fee for production of Product for Aventis during the Initial Term shall be \$8.00 per kilogram for all Product ordered for production. The fee set forth above includes all amounts relating to the depreciation of the Capital Improvements referred to in Article 2F above). Commencing with the calendar year 2002, and each calendar year thereafter, the fees set forth above may be adjusted, to reflect increases in manufacturing costs according to the escalation formula set forth in Appendix C hereto.

Cedar shall invoice Aventis at the end of each month during the term of the Agreement for all quantities of Product delivered during such month, which deliveries shall be Ex works, at the applicable toll manufacturing fee, and for all raw materials (including NaMO) purchased by Cedar hereunder. Such invoices shall be due and payable by Aventis thirty (30) days from date of invoice.

J. **Miscellaneous.** The Agreement shall contain additional terms and provisions normally contained in agreements of this nature.

Article 3 - Schedule of Target Dates.

A. The detailed engineering drawings describing the Capital Improvements, and Cedar's final cost to install the Capital Improvements to be amortized over the Initial Term of Agreement are attached as Appendix B. Appendix B includes a schedule of the costs incurred and to be incurred by Cedar while negotiation of the Agreement is pending. All such costs and contractual commitments incurred by Cedar as set out in such schedule of costs shall be for Aventis' account, either for amortization and reimbursement in accordance with the provisions of Article 2F hereinabove, or, alternatively, in the event that, following good faith negotiations, the Agreement is not executed by the parties on or before December 31, 2000, or, if the Agreement is executed by the parties, but is subsequently terminated for reasons other than for default by Cedar prior to the end of the Initial Term, such costs (to the extent incurred by Cedar and unamortized) shall be paid in full by Aventis to Cedar upon the occurrence of any such event.

B. The Product and Raw Material specifications are attached as Appendix A. The Appendices hereto will be used as Exhibits to the Agreement.

C. On or before September 30, 2000, Aventis shall prepare and deliver to Cedar a proposed first draft of the Agreement.

D. The parties will work together with the objective of submitting a final draft of the Agreement to their respective managements for approval on or before October 31, 2000.

Article 4 - Nature of Agreement. The provisions of this Memorandum of Understanding are intended by the parties to be binding. This Memorandum of Understanding shall become effective on the Effective Date and remain valid until the earlier of the signature of the Agreement or December 31, 2000.

Article 5 - Confidentiality. The parties hereby agree that any information exchanged pursuant hereto shall be subject to the provisions of the Secrecy Agreement and shall be considered "Confidential Information" as such term is defined in the Secrecy Agreement, provided that: (i) the parties hereby agree to extend the term of the Secrecy Agreement until December 31, 2000 and (ii) any information exchanged pursuant hereto which would constitute Degussa-Huls Confidential Information as such term is defined in the Degussa Secrecy Agreement, shall be subject to the Degussa Secrecy Agreement.

Article 6 - Dispute Resolution, Applicable Law. All disputes arising in connection with the present Memorandum of Understanding shall be finally settled under the rules of Arbitration of the International Chamber of Commerce by one or more arbitrators appointed in accordance with the said Rules.

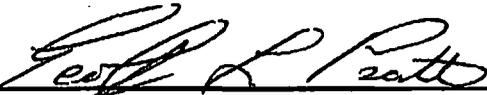
The arbitration shall be conducted in the English language in New York City.

This Memorandum of Understanding shall be construed in accordance with and governed by the laws of the State of New York.

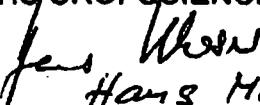
Article 7 - General. The terms of this Memorandum of Understanding may only be amended, modified or waived by a separate document in writing which has been signed by both parties. This Memorandum of Understanding supersedes any prior written or oral agreements or understandings between the parties with respect to the subject matter hereof and may be executed in counterparts, each of which shall constitute an original and all of which, when construed together, shall constitute the same instrument. Unless otherwise expressly agreed by the parties, neither party may transfer or assign this Agreement to any third party without the prior written consent of the other party.

Executed by the parties, acting by and through their authorized representatives, as of the dates appearing below.

CEDAR CHEMICAL CORPORATION

By: 
Name: GEORGEY L PRATT
Title: VICE PRESIDENT SPECIALTY CHEMICALS
Date: August 9, 2000

AVENTIS CROPSCIENCE MATIÈRES ACTIVES

By: 
Name: Hans MOSER
Title: Head Global Strategy
Date: 31. 08. 2000

Appendix A: Product and Raw Material Specifications

Appendix B: Capital Expenditures

Appendix C: Escalation Formula

APPENDIX A 1/4 : Product and Raw Material Specifications

Cyclanilide Specifications

1. ANALYTICAL SPECIFICATIONS

Determinations	Methods of analysis	Specifications (g/Kg)	Frequency
• Appearance	Visual	White to yellowish flowing powder	each batch
• CYCLANILIDE content	C.817.06.95	960 min.	each batch
• Water	CIPAC MT 30.1	5 max.	each batch
• Xylène	C.816.06.95	1 max.	each batch
Process Impurities :			
- RPA 116741 (imp.A)	C.821.07.95	3 max.	each batch
- 2,4 dichloroaniline	C.821.07.95	1 max.	each batch
- RPA 090945	C.821.07.95	10 max.	each batch
- RPA 111030	C.821.07.95	10 max.	each batch
- RPA 114924	C.821.07.95	15 max.	each batch
- RPA 093903	C.821.07.95	1 max.	each batch
- RPA 090899	C.821.07.95	1 max.	each batch

Cross contamination prevention :

All possible impurities from the implementation of an other production in the equipment involved in manufacturing of Cyclanilide, must be identified and quantified.

2. PACKAGING

- Polyéthylène drums : 120 l.
- Net weight : 50 Kg of Cyclanilide

APPENDIX A 2/4 : Product and Raw Material Specifications

2,4 Di Chloraniline Specifications (For Cyclanilide)

1. ANALYTICAL SPECIFICATIONS

Determinations	Methods of analysis	Specifications (g/Kg)	Frequency
• Appearance	Visual	Molten product colourless to brown	each batch
• Solidification point		60° C min.	each batch
• Purity	Gas chromatography	990 min.	each batch
• Water	Karl Fischer	1 max.	each batch
Process Impurities			
- 2,5 Di chloraniline	Gas chrom.	2 max.	each batch
- 2,6 Di chloraniline	Gas chrom.	1 max.	each batch
- 3,4 Di chloraniline	Gas chrom.	1 max.	each batch
- Others impurities (sum)	Gas chrom.	3 max. (1 max for each)	each batch
- Chlorides		100 ppm max.	

2. PACKAGING

- Steel drum for liquid product.

pl.

APPENDIX A 3/4 : Product and Raw Material Specifications

CDM Specifications

1. ANALYTICAL SPECIFICATIONS

Determinations	Methods of analysis	Specifications
• Purity	GC / MS	min. 97,50 %
• Dimethylmalonate	GC / MS	max. 1,00 %
• Dimethylformamide	GC / MS	max. 0,75 %

fl

APPENDIX A 474 : Product and Raw Material Specifications

Sodium Methylate Specifications Solution 30 % in Methanol

1. ANALYTICAL SPECIFICATIONS

Determinations	Methods of analysis	Specifications
<ul style="list-style-type: none">Total alkalinity calculated as : NaOCH₃ NaOCH₃ content	Titration	29,5 % - 31,0 % 29,5 % - 30,5 %
<ul style="list-style-type: none">Na₂CO₃ + NaOH content	Titration	Max 0,5 %
<ul style="list-style-type: none">Color	ISO 6271	Max 30 APHA

76.

APPENDIX B 1/1 : Capital Expenditures

Cost Estimate Summary : Cyclanilide Campaign

	Labor	Material	Total
• 1.0 Site work			
Subtotal	\$ 8 400,00	\$ 1 000,00	\$ 9 400,00
• 2.0 Civil			
Subtotal	\$ 23 275,00	\$ 11 500,00	\$ 34 775,00
• 3.0 Reactors (Colled/ Jacketed)			
Subtotal	\$ 25 550,00	\$ 27 600,00	\$ 53 150,00
• 4.0 Vessels/Tanks			
Subtotal	\$ 5 600,00	\$ 10 000,00	\$ 15 600,00
• 5.0 Heat exchangers			
Subtotal	\$ 1 750,00	\$ 18 000,00	\$ 19 750,00
• 6.0 Rotating Equipment			
Subtotal	\$ 6 300,00	\$ 31 000,00	\$ 37 300,00
• 7.0 Filtering Equipment			
Subtotal	\$ 700,00	\$ 6 000,00	\$ 6 700,00
• 8.0 Piping			
Subtotal	\$ 107 940,00	\$ 91 917,50	\$ 199 857,50
• 9.0 Electric/ Instrumentation			
Subtotal	\$ 104 860,00	\$ 158 750,00	\$ 263 610,00
• 10.0 Inspection/ Engineering			
Subtotal	\$ 35 000,00	\$ 0,00	\$ 35 000,00
• 11.0 Rentals & 12.0 Miscellaneous			
Subtotal	\$ 840,00	\$ 6 500,00	\$ 7 340,00
SUBTOTAL	\$ 320 215,00	\$ 362 267,50	\$ 682 482,50
Contingency (10 %)	\$ 32 021,50	\$ 36 226,75	\$ 68 248,25

APPENDIX C 1/1 : Fee Escalation Formula

Application commencing in 2002

$$P_{n+1} = P_n \left[0,15 + 0,425 \frac{W_{n+1}}{W_n} + 0,425 \frac{PPI_{n+1}}{PPI_n} \right]$$

- P_{n+1} = Adjusted toll fee for the contract year in \$ / Kg of Cyclanilide.
- P_n = Toll fee of the previous contract year in \$ / Kg of Cyclanilide
- W_{n+1} = Employment Cost Index published by the US Bureau of Labor Statistic available the month of december preceding the date of ajustement.
- W_n = Employment Cost Index of the previous contract year.
- PPI_{n+1} = Producer Price Index, for the available month of december preceding the date of ajustement :
 - Industry and Product : Industrial Organic Chemical, Code 296.
 - Subcategory : Agricultural Chemical, nbc, other pesticidal preparations primarily for agricultural, Code 2879 – 8.
- PPI_n = Producer Price Index of the previous contract year.

40.

M. Garner

From: Dan.Stahl@aventis.com
Sent: Friday, September 01, 2000 8:23 AM
To: mgarner@cvrtmail.com
Cc: Serge.Ravet@aventis.com; Dave.Linhardt@aventis.com
Subject: PPI Index

Hi Melissa-

I don't think we've met yet but I am part of the same Aventis Global Sourcing Team Serge Ravet belongs to, however I'm located here in the US. I will be supporting Cedar and Serge in our implementation of the cyclanilide manufacturing.

Serge asked me to forward on to you the PPI Index information for the MOU. The Industrial Organic Chemicals is number 286 I believe you may have thought it was 296. 2879-8 is a valid code number that we found in hardcopy of the PPI Detailed Report. If you are doing your searching via the Internet, the Dept of Labor site can be difficult. Unless all the magic "symbols and spaces" are included in the query, the report may not print. Let me know if you would like me to obtain the data and we can fax to appropriate persons.

We also need your labor index. Thanks for your help, I'm sure we'll be in touch!

Dan Stahl
Aventis Global Sourcing
Phone: 919.549.2195
Fax: 919.549.2003
E-mail: Dan.Stahl@aventis.com



August 10, 2000

Serge Ravet
Toll Manufacturing Manager
Aventis Crop Science
14-20 rue Pierre Baizet - B.P. 9163 F-69263
Lyon Cedex 09
France

Dear Serge,

Enclosed are the three originals of the MOU which have been signed on behalf of Cedar. You will send us an original when Hans has signed for Aventis.

This will end my formal tour of duty on the project and you should contact Chris McGee regarding the Agreement which I believe you will draft. I will be available for comment and clarification as the Agreement proceeds, should that be necessary.

Regards,

A handwritten signature in black ink, appearing to read "Geoffrey Pratt", is written over a horizontal line.

Geoffrey Pratt

Cc: Chris McGee

Aventis CropScience



**CEDAR
Mr Geoffrey L. PRATT
5100 Poplar Ave.
Suite 2414
Memphis, TN 38 137
UNITED STATES**

3 August, 2000

Réf : fb/SR 106.00

CONFIDENTIAL

Subject : Cyclanilide MoU

Dear Geoffrey,

You will find herewith three copies for signature of the Cyclanilide MoU we agreed on.

While you will send them back , Hans Moser will be in the office to sign them on behalf of A.C.S.

Best Regards.

A handwritten signature in black ink, appearing to read "Serge Ravet", written over a horizontal line.

**Serge RAVET
Toll Manufacturing Manager**

AGREEMENT

THIS AGREEMENT entered into as of the 15th day of November, 2000, by and between Aventis CropScience USA LP ("Aventis"), successor to Rhone Poulenc Ag Company ("R-P") and Cedar Chemical Corporation ("Cedar").

WHEREAS, R-P and Cedar entered into an Assignment and Assumption Agreement dated as of June 1, 1997, (the "Agreement") pursuant to which Cedar assigned to R-P its rights and obligations under that certain Ethephon Supply Agreement between Cedar and MicroFlo Company dated as of January 1, 1996, as amended by Amendment Agreement dated February 18, 1997, and Aventis assumed Cedar's obligations under the Ethephon Supply Agreement and agreed to pay Cedar certain commissions in connection with its performance thereunder; and

WHEREAS, Aventis desires to purchase from Cedar, and prepay Cedar's rights to receive commissions pursuant to the Agreement, and Cedar is willing to accept such prepayment in accordance with the terms and conditions hereof.

NOW, THEREFORE, in consideration of the premises and the mutual covenants contained herein, the parties agree as follows:

1. Aventis shall pay to Cedar the sum of Six Million Dollars (\$6,000,000) on or before December 15, 2000, which payment shall be made by check payable to Cedar for delivery to Cedar's office in Memphis, Tennessee to the attention to J. Randal Tomblin, President, via Federal Express, on the first business day following the full execution of this Agreement and delivery of same to Aventis.

2. Cedar agrees to accept the payment referred to in paragraph 1 of this Agreement in full satisfaction of its rights under the Agreement, including its right to receive commissions thereunder and its right to require that the Ethephon Supply Agreement be reassigned to Cedar in accordance with the terms of the Agreement, and will release R-P and Aventis from all remaining obligations to Cedar under the Agreement accruing on or after the date on which Cedar receives such payment.



J. Randal Tomblin
President and CEO

November 13, 2000

Mr. John Wichtrich
Vice President/General Manager
Sedagri
P.O. Box 12014
2 T.W. Alexander Parkway
Research Triangle Park, North Carolina 27709

Dear John:

Per your request, we have reviewed the possibility of producing ethephon for Sedagri in the future and regret to inform you that we will not be able to do so.

Although some of the equipment we previously used for ethephon production remains in place, we have committed the production facility to other uses for the foreseeable future. In addition to production of cylanilid for Aventis, Cedar utilizes the facility for production of trishydroxy-amino methane, a proprietary buffering agent used in resin and pharmaceutical applications, and 2-Amino butanol, an intermediate used for the production of ethambutol, the primary drug used to combat tuberculosis.

If anything should change in the future, I will, of course, let you know.

Sincerely,

Randal Tomblin

cc: Jeff Sorrell

ADEQ0015577

Aventis
Cyclanilide

Pending Contract – waiting for another trial run

MANUFACTURING AND SUPPLY AGREEMENT

THIS MANUFACTURING AND SUPPLY AGREEMENT (the "Agreement") is made and entered into as of the date last below written (the "Effective Date") by and between Cedar Chemical Corporation, a Delaware corporation, having its principal place of business at Suite 2414 Clark Tower, 5100 Poplar Avenue, Memphis, Tennessee 38137 (hereinafter referred to as "Cedar"), and Aventis CropScience Matières Actives, a French "société en nom collectif" having its registered office at 14/20, rue Pierre Baizet, 69009 LYON, France (hereinafter referred to as "Aventis").

WITNESSETH:

- ◆ WHEREAS, Aventis desires to retain an independent third party contractor to manufacture for it Cyclanilide (hereinafter the "Product") from DCA and CPDM.
- ◆ WHEREAS, Cedar owns and operates a chemical manufacturing facility located at West Helena, Arkansas which, following installation of certain capital improvements and equipment defined below, will be capable of producing Product from DCA and CPDM utilizing Aventis' manufacturing process disclosed by Aventis to Cedar pursuant to the Secrecy Agreement and processes disclosed to Cedar pursuant to the Degussa Secrecy Agreement and pursuant hereto;
- ◆ WHEREAS on August 31, 2000, the Parties signed a Memorandum of Understanding (the "MOU") whereby they agreed that they would promptly commence negotiations with each other in good faith with the intent of reaching an agreement satisfactory in form and substance to their respective managements and incorporating the terms and principles set forth herein.

Draft dated February 8, 2001

NOW, THEREFORE, in consideration of the promises and the mutual covenants herein contained, the Parties hereto agree as follows:

Article 1. DEFINITIONS

~~When used in this Agreement, each of the capitalised-terms set forth in this Article 1 shall have the meaning set forth below:~~
When used in this Agreement, each of the ~~capitalised-~~capitalized terms set forth in this Article 1 shall have the meaning set forth below:

"Affiliate" means any entity that directly or indirectly, through one or more intermediaries, now or hereafter, controls or is controlled by or is under common control with a Party hereto, except that in countries where ownership of a majority or a controlling interest by a foreign entity is not permitted by law, rules or regulations, the parent's direct or indirect voting interest may be less than a majority or controlling interest. "Control" (including the terms "controls" "controlled by", "controlling" and "under common control with") are understood as meaning the possession, direct or indirect, of the power to direct or cause the direction of the management and policies of a person or entity whether through the ownership of voting securities, by contract or otherwise.

"Capital Improvements" means the capital improvements ~~set forth in the detailed engineering drawings attached hereto as~~described in Appendix 1.

"CPDM" means (cyclopropane- 1,1-dicarboxylic acid) dimethyl ether.

"Cyclanilide" means (1-(2,4-dichlorophenylaminocarbonyl)-cyclopropane carboxylic acid).

"DCA" means (2,4 Dichloro aniline).

"Degussa Secrecy Agreement" means the Secrecy Agreement between Aventis and Cedar dated as of November 22, 1999.

"EPA" means the Environmental Protection Agency of the United States and all applicable state agencies responsible for the protection of the environment.

"NaMO" means Sodium Methoxide.

"Non-Strategic Raw Materials" means the following raw materials: xylene, formic acid and caustic soda.

"Party" or **"Parties"** means Aventis and/or Cedar.

"Process" shall mean all the scientific and technical information useful for the production of Product conforming to the Specifications and shall include all related specifications, secret processes, process patents, patent applications, trade secrets, know-how, information on use and choice of equipment and raw materials, process books, quality control plans, pipe and instrument designs, methods of analysis, engineering data, installation plans and operation procedures and shall include all process information disclosed to Cedar by Aventis pursuant to the Secrecy Agreement and pursuant to the Degussa Secrecy Agreement.

"Product" means Cyclanilide.

Draft dated February 8, 2001

"Plant" means the chemical manufacturing facility located at West Helena, Arkansas which is owned and operated by Cedar.

"Raw Materials" means DCA, CPDM and NaMO.

"Raw Materials Specifications" means the specifications for the Raw Materials and Non-Strategic Raw Materials attached as Appendix 2 hereto.

"Secrecy Agreement" means the Secrecy Agreement between Aventis and Cedar dated as of May 14, 1999.

"Specifications" means the specifications for the Product set forth in Appendix 3.

"Third Party(ies)" means any person or entity other than a Party or an Affiliate of a Party.

Unless otherwise stated, all clauses and articles referred to herein are clauses and articles of this Agreement.

Article 2. MANUFACTURING

- 2.1. Subject to the terms and conditions of this Agreement, Cedar hereby agrees to use the Process and any manufacturing or other information and the Raw Materials supplied to it hereunder by or on behalf of Aventis exclusively to supply Product to Aventis and shall not use such Process or information or Raw Materials to supply any entity other than Aventis or its Affiliates with Product. Cedar may not delegate, transfer or sub-contract any of its duties and obligations hereunder without the prior written consent of Aventis. If Aventis consents to such a delegation, transfer or sub-contract, Cedar shall remain liable for all such duties and obligations so delegated, transferred or sub-contracted.
- 2.2 Cedar shall perform the manufacturing operations contemplated hereunder at the Plant.
- 2.3 Aventis shall provide reasonable technical assistance to Cedar during startup of the initial campaign.

Article 3. MATERIALS

3.1. Raw Materials

- (a) Aventis or its nominee shall be responsible for supplying Cedar, at Aventis' cost and delivered to the Plant, with such amounts of Raw Materials meeting the Raw Materials Specifications, as are requested by Cedar in writing during the term of this Agreement, which Cedar shall require in order to enable Cedar to produce, in campaigns scheduled in accordance with the provisions of Article 5, all quantities of Product ordered by

Aventis which have been the subject of a firm order as described in Article 5.1. Cedar shall provide Aventis with prior written notice three months in advance of the requested delivery date for any such Raw Materials.

- (b) The Raw Materials shall remain the property of Aventis until physically transformed into the Product and Cedar shall be responsible for paying Aventis the replacement cost of such Raw Materials if such Raw Materials are damaged after delivery to Cedar. Cedar shall reimburse Aventis for all of Aventis' costs in supplying Raw Materials to Cedar, if such Raw Materials are used by Cedar to produce Product, which due to Cedar's negligence or failure to follow the Process, does not meet the Specifications.
- (c) The Raw Materials remaining in the possession of Cedar on the effective date of termination or expiration of this Agreement shall, at Aventis' option, be returned to Aventis at Aventis' cost, unless such termination is a prior termination due to the condition or conduct of Cedar, in which case the cost shall be for Cedar.
- (d) If Cedar is able to obtain a more favorable price than Aventis for purchase of NaMO, following prior approval from Aventis, Cedar shall purchase and supply such quantities of NaMO as shall be required for it to perform hereunder and such NaMO shall be treated as a Non-Strategic Raw Material as described herein.

3.2. Non-Strategic Raw Materials

Cedar shall supply the Non-Strategic Raw Materials. In all cases, Cedar shall use a reasonable competitive purchasing process. Non-Strategic Raw Materials shall meet the Raw Materials Specifications given in Appendix 2. Cedar may not use Non-Strategic Raw Materials which do not meet the Raw Materials Specifications, unless Aventis has given its prior written consent.

3.3 Storage

Cedar shall maintain all inventories of Raw Materials, Non-Strategic Raw Materials and Product in good condition.

Article 4. MANUFACTURE

4.1. Production

Cedar shall, using the Process, manufacture Product which complies with the Specifications.

4.2. Specifications, Compliance

Cedar warrants that the Product shall be manufactured at all times in conformity with the Specifications and all applicable laws and regulations and registration requirements, and that all required records will be maintained in compliance therewith. Cedar warrants that the Product shall be free of any impurities resulting from the use of equipment used to manufacture Product for any other use (cross-contamination), unless Aventis has accepted such levels of impurities pursuant to Article 4.5(g) below. Cedar makes no other warranty with respect to Product hereunder, including warranties of merchantability or fitness for a particular purpose, and none shall be implied.

4.3. Retention of Samples and Records

Cedar shall maintain representative samples of the Product from each production batch for a minimum period of three (3) years. Upon request of Aventis, Cedar shall make available such retained samples to Aventis. Cedar shall also maintain production records which shall be accessible to Aventis for inspection in accordance with Article 4.4 below. Production reports shall be kept by production batch for three (3) years after production. Analytical reports of the annual production process shall be forwarded to Aventis upon its request.

4.4. Audits and Reports

On or before the 25th of each month during the term of the Agreement, Cedar shall provide Aventis with a report on the inventories, consumption and deliveries of Raw Materials and Non-Strategic Raw Materials and the manufacture, inventories and delivery of Product. Aventis shall have the right to make or have its independent auditors made an inventory audit (either physical or book inventory, or both) of the Product and Raw Materials and Non-Strategic Raw Materials, in progress and finished, from time to time, with advance notice to Cedar and at such time during Cedar's regular business hours as it may reasonably elect, and the auditors shall have access to Cedar's facilities and books and records which are relevant to this purpose. Aventis shall also have the right to audit or have audited, all invoices and documentation evidencing Cedar's costs for purchase of Non-Strategic Raw Materials.

4.5. Quality Control.

- (a) Cedar shall weigh and assay the Raw Materials sent to Cedar by Aventis for use in manufacturing the Product. Cedar's acceptance of Raw Materials delivered hereunder shall be a waiver by Cedar of claims with respect to deliveries which are damaged or do not conform to the Raw Materials Specifications unless Aventis receives notice of such a claim within thirty (30) days of delivery (or if such damage or non-conformity could not be discovered in the course of a reasonable incoming inspection, Cedar shall have the right to give notice within ninety (90) days of discovery thereof). Aventis shall replace such Raw Materials in a timely manner so as not to interfere with the production

of the Product and shall be responsible for the cost of returning the non-conforming Raw Materials to Aventis.

- (b) Cedar shall perform in-process quality control for the Product as set forth in the Process, which Process shall include a quality control plan. The quality control assays shall be done in accordance with laboratory practices as required by the EPA. Cedar may perform other types of quality control for the Product as it deems necessary and advisable. Aventis may, at its discretion, spot sample and analyse the Raw Materials, Non-Strategic Raw Materials and Product. Aventis may spot sample all batches during the first campaign.
- (c) For so long as Cedar's laboratories remain certified by Aventis, Aventis will accept and take delivery of the Product on the basis of Cedar's certificates of analysis for each batch which shall accompany such deliveries. Aventis' acceptance of Product delivered hereunder shall be a waiver by Aventis of claims with respect to deliveries which are damaged or do not conform to the Specifications unless Cedar receives notice of such a claim within thirty (30) days following receipt of certificates of analysis by Aventis (or if such damage or non-conformity could not be discovered in the course of a reasonable incoming inspection, Aventis shall have the right to give notice within ninety (90) days of discovery thereof).
- (d) Any dispute arising between the Parties as to whether a shipment lot of Product conforms with the Specifications shall be resolved by reference to the analytical methods identified in Appendix 3 ~~to be agreed by the Parties~~. If a shipment lot of Product manufactured hereunder is found not to conform with the Specifications, Cedar shall, at its expense, at the election of Aventis, either replace such non-conforming Product with conforming Product, reformulate the shipment lot to meet the Specifications, or reimburse Aventis for all of Aventis' costs relating to such Product. Should there be any disagreement between Cedar and Aventis, the Parties shall meet and negotiate in good faith and failing agreement within a period of ninety (90) days, either Party may submit the matter to the binding arbitration procedures described in Article 13 hereof.
- (e) Cedar shall inform Aventis of any unexpected deviation(s) from the operating conditions as they may have an adverse impact on the quality of the Product, even if the Product conforms to the Specifications. The Parties shall jointly examine the consequences of such deviation(s). Cedar shall not ship any such quantities of Product without the prior consent of Aventis.
- (f) Upon reasonable notice, Aventis shall have the right to have its authorised representative(s) present at the Plant to observe the manufacture of the Product and inspect the conditions of storage of the Product, Raw Materials and Non-Strategic Raw Materials. The presence of Aventis' representatives shall not relieve Cedar from any liability or of its duties or obligations under this Agreement.
- (g) Should Cedar wish to use any equipment involved in the manufacture of Product for any other production, Cedar shall identify and quantify for Aventis all resulting potential impurities in the Product which could thereby be introduced. Upon receipt of such information, Aventis will set the ARIL (Acceptable Residual Impurities Level), which Cedar shall thereupon be required to follow. If Cedar is prevented from

providing Aventis any of the information described above for valid reasons arising from its contractual commitments to another client, Cedar shall provide Aventis with a contact within the other client's organization so that Aventis may seek to obtain such information.

4.6. Handling and Storage

Cedar shall provide and maintain sufficient facilities for the safe storage of the Raw Materials, the Non-Strategic Raw Materials and the Product. Cedar shall provide Aventis with a completed receiving report form upon Aventis' request. Cedar shall preserve and protect the Raw Materials, Non-Strategic Raw Materials and the Products from contamination, loss, theft, substitution, damage, degradation or destruction and shall under no circumstances use the Raw Materials or Non-Strategic Raw Materials for any purpose other than manufacture of the Product.

4.7 Insurance

Cedar shall insure the Raw Materials, Non-Strategic Raw Materials, work-in-process, and the Product against loss, damage and the like, and shall ensure that it has insurance coverage sufficient to fully insure it against all liability which it might incur in the course of performance of this Agreement. At the request of Aventis, Cedar will provide Aventis with evidence that it has subscribed to the insurance policies contemplated hereby with a reputable insurance company acceptable to Aventis, which insurance policies shall in no way exonerate or reduce Cedar's liability hereunder.

Article 5. SCHEDULING, FEE

5.1 Scheduling

Aventis shall submit its good faith estimate of its orders for Product to be produced by Cedar in each calendar year during the term of the Agreement by no later than July 1 of the previous calendar year, provided that such estimate will be for the purpose of facilitating scheduling of manufacture only and will not be binding, provided that a firm order will be issued by Aventis by October 31 of such year, which order shall specify the delivery date(s) for the Product.

5.2 Manufacturing Fee

- (a) Cedar's manufacturing fee for production of Product for Aventis during the Initial Term as defined in Article 10.1 of this Agreement shall be \$8.00 per kilogram for all Product ordered. The fee set forth above includes all amounts relating to the depreciation of the Capital Improvements referred to in Article 6 below. Commencing with the calendar year 2002 and each calendar year thereafter, the fees set forth above may be adjusted to reflect increases in manufacturing costs according to the escalation formula set forth in Appendix 4 hereto.
- (b) Cedar shall invoice Aventis at the end of each month during the term of the Agreement for all quantities of Product delivered during such month, which deliveries shall be Ex Works Plant as such term is used in the Incoterms 2000, at the applicable manufacturing fee, and for all Non-Strategic Raw Materials (including NaMO if

purchased by Cedar pursuant to the terms hereof) purchased by Cedar hereunder and used to manufacture such quantities of Product. Such invoices shall be due and payable by Aventis thirty (30) days from date of invoice. Cedar shall load the Product into the carrier selected by Aventis.

5.3 Product

- (a) Aventis shall order and Cedar shall produce from Raw Materials supplied by Aventis not less than seven hundred ninety (790) metric tons of Product during the Initial Term as defined in Article 10.1 of this Agreement. For indicative purposes, Aventis' current estimate of its yearly requirements for the Product is one hundred fifty (150) metric tons per year, provided that such figure is provided for information purposes only and will not be binding.
- (b) ~~Aventis shall order and purchase eighty (80) metric tons of Product from Cedar by December 31, 2000, and shall order and purchase one hundred fifty two hundred thirty (230) metric tons of Product from Cedar by December 31, 2001.~~
- (c) In the event Aventis shall not have ordered and purchased from Cedar pursuant to the Agreement, at least one hundred and twelve (112) metric tons of Product during 2002 and in each calendar year of the Initial Term thereafter, then Aventis shall pay an amount equal to \$8.00 multiplied by the difference between one hundred and twelve (112) metric tons and the amount of Product ordered and purchased, provided however, that any such amounts paid by Aventis will be credited as a prepayment for any Product to be delivered in the following calendar year of the Initial Term in excess of one hundred and twelve (112) metric tons.

If during 2002 or any calendar year of the Initial Term thereafter, Aventis orders and purchases an amount of Product which exceeds one hundred and twelve (112) metric tons, such excess shall be credited towards, and shall thereby reduce, Aventis' commitment in respect of the one hundred and twelve (112) metric tons of Product for the following calendar year of the Initial Term, provided that the credit will be limited to twenty-eight (28) metric tons.

- (d) The Product shall be packaged and labelled by Cedar in accordance with the Specifications.

5.4 Raw Material Usage

Maximum usage factors applicable to consumption of Raw Materials (expressed in kilograms of Raw Materials consumed per kilogram of Product) and Non-Strategic Raw Materials (expressed in kilograms of Non-Strategic Raw Materials consumed per kilogram of Product) shall be determined by mutual agreement of the Parties based on actual results achieved during the first industrial production of Product by Cedar and shall be set forth in Appendix 5.

Thereafter, any over-consumption of Raw Materials or Non-Strategic Raw Materials (of more than 3.5%) shall be for Cedar's account. The savings on any under-consumption

of Raw Materials or Non-Strategic Raw Materials of more than 3.5% shall be shared equally by the Parties.

Within thirty (30) days of the end of each campaign during the Initial Term and any extension of the Initial Term, Cedar will prepare and provide Aventis with a statement of consumption of Raw Materials and Non-Strategic Raw Materials, accompanied by documentation demonstrating Cedar's costs for such Non-Strategic Raw Materials. Upon receipt thereof, Aventis will provide Cedar with a statement of its cost for such Raw Materials. Within thirty (30) days of receipt of such statement from Aventis, the Party owing compensation to the other Party pursuant to this Article 5.4 will pay the other Party all amounts so due. The Parties may, by mutual agreement, decide that any such amounts will be taken into account in the next invoice for Product delivered to Aventis.

5.5 Wastes

Cedar shall be solely responsible for disposal of all wastes (including without limitation, solid, liquid and hazardous materials and wastes, as the same may be defined by the EPA and any regulations issued pursuant to laws regulating the environment) generated in connection with the manufacturing operations contemplated hereby, and agrees to comply with all applicable laws, rules and regulations pertaining to the generation, storage, transport and disposal of such wastes. Cedar agrees to minimize the generation of wastes associated with manufacturing of the Product and shall recycle, use or dispose of such wastes in approved off-site facilities as directed from time to time by Aventis. Failure by Cedar to handle wastes in accordance with these provisions shall be deemed to be a material breach of this Agreement. Aventis shall reimburse Cedar for off-site waste disposal, provided that the waste disposal charge to Aventis shall not exceed \$ 1.25 per kilogram of Product, provided that in the event new governmental regulations are promulgated which prohibit Cedar from disposing of manufacturing wastes in the same manner as during the calendar year 2000, the Parties shall make their best efforts to reach agreement on a revised cap for off-site waste disposal costs per kilogram of Product. Cedar shall be solely responsible for any liability resulting from the violation of any environmental law as a result of Cedar's performance hereunder, and shall indemnify Aventis against any claims against Aventis or its Affiliates by any Third Party, including any public authority, in respect of any such violation.

Article 6. CAPITAL IMPROVEMENTS

As set forth in Appendix 1, Cedar's cost of Capital Improvements is \$ 751 000. This cost will be amortized over the first seven hundred ninety (790) metric tons of Product to be produced by Cedar and paid for by Aventis during the Initial Term of the Agreement. Accordingly, \$ 0.95 for each kilogram of Product purchased by Aventis from Cedar hereunder shall be credited to Aventis' obligation to reimburse Cedar's cost of Capital Improvements. If Cedar has not been totally reimbursed for this agreed cost of the Capital Improvements upon expiration of the Initial Term on December 31, 2006, Aventis shall be responsible for reimbursing Cedar the balance of this agreed cost by December 31, 2006. If this Agreement is terminated for reasons other than for default by Cedar prior to the end of the Initial Term,

the remaining portion of this agreed cost (to the extent incurred and unamortized) shall be paid in full by Aventis to Cedar upon the occurrence of such termination.

Article 7. TITLE AND RISK OF LOSS

Title to the Raw Materials supplied by Aventis to Cedar pursuant to this Agreement and to the Product manufactured by Cedar for Aventis pursuant to this Agreement shall at all times be in, and remain in, Aventis. Risk of loss, theft, degradation, substitution, contamination, destruction or damage of the Raw Materials, the Non-Strategic Raw Materials and the Product shall be borne by Cedar until delivered to Aventis as provided herein. Aventis shall bear the risk of loss, theft, degradation, substitution, contamination, destruction or damage to the Product after the Product is loaded onto the carrier designated by Aventis.

Article 8. CONFIDENTIALITY

- 8.1 Cedar shall keep secret and confidential all Process and Product information and other proprietary and technical information communicated in any form whatsoever by Aventis to Cedar from time to time in connection with this Agreement, and any information derived therefrom (collectively, the "Confidential Information"), and shall not disclose such Confidential Information, in whole or in part, to any Third Party. Cedar shall disclose the Confidential Information to its personnel on a strict need to know basis and shall not use the Confidential Information for any purpose other than the performance of the Agreement. This obligation of secrecy and non-use shall continue after the expiration or termination of this agreement for a period of 10 (ten) years.
- 8.2 The foregoing commitments shall not apply, however, to any part of such Confidential Information, which:
- (i) was known to the public or generally available to the public prior to the date of disclosure by Aventis,
 - (ii) becomes known to the public or generally available subsequently to the date of disclosure by Aventis through no act or failure to act on the part of Cedar or its Affiliates, or
 - (iii) Cedar can establish by adequate proof was received in good faith by Cedar from a Third Party having a bona fide right to disclose or make available such Confidential Information to Cedar.
- 8.3 The said Confidential Information shall not be deemed to be within one of the foregoing exceptions if it is merely embraced by more general information available in the public domain or in Cedar's possession. In addition, any combination of features shall not be deemed to be within the foregoing exceptions merely because the individual features are in the public domain or in Cedar's possession.

- 8.4 Cedar shall return promptly to Aventis, upon termination of the Agreement or upon Aventis' request, all of the Confidential Information and any documents, drawings, electronic media or other material containing or derived from the Confidential Information.
- 8.5 The contents of this Agreement may not be disclosed to any Third Party without the prior written consent of both Parties. Should a Party desire to make a communication to a Third Party or to the public regarding the transaction contemplated by the Agreement, such Party must first receive the prior written approval of the other Party.

Article 9. INDEMNIFICATION

9.1. Indemnification of Aventis.

Cedar shall defend, indemnify and hold harmless Aventis, its directors, officers, employees, agents and Affiliates, from and against all claims, actions, proceedings, demands and all liabilities, losses, damages, fines, penalties and expenses (including without limitation, reasonable attorney and consultant expenses) and all direct, special, indirect and consequential loss, damage or expense, whether or not made by a Third Party, which are caused by or arise out of, or in connection with (i) its manufacturing of the Product, including disposal of wastes therefrom ~~(provided such claims are not due to Aventis' negligence, fault, omission or conduct or Aventis' breach of any warranty made herein or of this Agreement)~~; (ii) storing or handling of the Raw Materials or Non-Strategic Raw Materials or the Product; or (iii) the negligent or intentional acts or omissions or the breach of any warranty or agreement made herein or of this Agreement by Cedar, its employees, agents or Affiliates, except to the extent that such claims are caused by Aventis' negligence, fault, omission or conduct or Aventis' breach of any warranty made herein or of this Agreement).

9.2. Indemnification of Cedar.

Aventis shall defend, indemnify and hold harmless Cedar, its directors, officers, employees, agents and Affiliates, from and against all claims, actions, proceedings and demands and all liabilities, losses, damages, fines, penalties and expenses (including without limitation, reasonable attorney and consultant expenses) and all direct, special, indirect and consequential loss, damage or expense, whether or not made by a Third Party, which are caused by or arise out of, or in connection with (i) ~~Aventis' the~~ transporting, storing, handling or use of Product after such Product has been delivered to Aventis, and (ii) the negligent or intentional acts or omissions or the breach of any warranty or agreement made herein or of this Agreement by Aventis, its employees, agents or Affiliates, except to the extent that such claims are caused by Cedar's negligence, fault, omission or conduct or Cedar's breach of any warranty made herein or of this Agreement).

Article 10. TERM AND TERMINATION

10.1. Term

The initial term of this Agreement (the "Initial Term") shall be from the Effective Date through December 31, 2006. Thereafter, the term of the Agreement shall be renewed for successive two year periods unless terminated by either Party upon notice to the other not less than one (1) year prior to the end of the Initial Term or one year prior to the end of any extension of the Initial Term of Agreement; provided that this Agreement shall not be so extended unless, prior to the end of the Initial Term or of any extended term, the Parties will have negotiated and reached mutual agreement in respect of the terms of such extension (including the price and quantity).

10.2. Prior Termination

- (a) Either Party may terminate this Agreement before the expiration of the Initial Term or the extended term by written notice to the other Party if:
 - (i) the other Party goes into bankruptcy or insolvency; or
 - (ii) the other Party (including any of its Affiliates) commits a material breach of its obligations under this Agreement and fails, within one month from notice of such breach to remedy the same (if capable of remedy) or (if incapable of remedy) to pay adequate compensation therefor.
- (b) Aventis shall have the right to terminate this Agreement by written notice with immediate effect if Cedar or any of its Affiliates uses the Confidential Information for purposes other than those specified herein.
- (c) Aventis shall have the right to terminate this Agreement immediately, with no further liability thereafter, except as provided in Article 6 of this Agreement, in the event that it decides to withdraw the Product from the market or if Aventis' business relating to the Product is sold or transferred to a Third Party.

10.3. Non-exclusive Remedy

The right of a Party to terminate this Agreement in the event of a breach hereof by the other shall not be an exclusive remedy for such breach, and such Party shall be entitled, in addition, to any damages or remedy available under applicable law.

10.4. Accrued Obligations

Neither the expiration nor any termination of this Agreement for whatever cause shall affect the rights or obligations of either Party which have accrued as of the date of such expiration or termination, nor shall it affect any rights or obligations of either Party

under this Agreement which are intended by the Parties to survive such expiration or termination.

Article 11. CONSEQUENCES OF TERMINATION

11.1. In the event of termination or expiration of this Agreement for any reason whatsoever, without prejudice to any legal or equitable rights or remedies of either Party, the following actions shall be taken:

- (a) Cedar shall immediately interrupt the manufacture of the Product and immediately return to Aventis the Confidential Information and all information relating to the Process and any other data or information it shall have received from Aventis during the term of this Agreement relating to the Product, or which is derived therefrom, and Cedar shall make no further use thereof without the written consent of Aventis.
- (b) The Parties shall continue to observe the provisions of Articles 4.3, 5.4, 8, 9, 11 and 13 hereto, which shall remain in full force and effect.
- (c) Aventis shall have the option, in its sole discretion, to purchase from Cedar, at the then applicable manufacturing fee, any inventory of Product in usable or merchantable condition.
- (d) Upon termination or expiration of this Agreement, Cedar will have no right to any compensation for cleaning or decontamination of its installations used to produce Product hereunder. Upon reasonable notice, Aventis shall have the right to have its representatives audit such cleaning or decontamination. The presence of any such representatives shall not relieve Cedar from any liability, duties or obligations in respect thereof.

Article 12. FORCE MAJEURE

- 12.1. Neither Party shall be liable for its delay in performing or failure to perform hereunder as a result of any contingency beyond its reasonable control, including but not limited to acts of God, fires, floods, wars, civil insurrection, sabotage, accidents, lockouts, labour disputes or shortages, any governmental laws, ordinances, rules, regulations, bans, action or inaction (such contingency herein referred to as a "Force Majeure").
- 12.2. The Party pleading circumstances of Force Majeure shall notify the other Party of the existence of such delay immediately and shall also notify the other Party as soon as the circumstances giving rise to such Force Majeure have abated. The Parties' obligations hereunder shall be suspended for the duration of any Force Majeure and shall resume upon termination of the Force Majeure, in accordance with the terms of this Agreement.

Article 13. ARBITRATION; APPLICABLE LAW

13.1. Method and Location

All disputes arising in connection with the present Agreement shall be finally settled under the rules of Arbitration of the International Chamber of Commerce by one or more arbitrators appointed in accordance with the said Rules. The arbitration shall be conducted in the English language in New York City.

13.2 Applicable Law

This Agreement shall be construed in accordance with and governed by the laws of the State of New York.

Article 14. IMPROVEMENTS

14.1 The Parties hereby agree that nothing contained herein shall be construed as granting any right to Cedar relating to the Process and Product information or any other proprietary and technical information communicated by Aventis to Cedar other than for Cedar to manufacture Product for Aventis in accordance with the terms and conditions hereof.

14.2 Cedar shall immediately notify Aventis of any know-how, improvement or patentable discovery resulting from Cedar's performance under this Agreement. Any such know-how, improvement or patentable discovery shall be the exclusive property of Aventis, which may file for patent protection thereon in its own name and at its own cost. Cedar hereby assigns its rights on such know-how, improvements or patentable discoveries to Aventis and will cause its employees to do the same if necessary. At the request and expense of Aventis, Cedar will provide any assistance and information required by Aventis to file any such patent application.

Article 15. REGULATORY COMPLIANCE, PRODUCT INFORMATION

15.1 Cedar shall manufacture Product for and on behalf of Aventis in accordance with all applicable laws and regulations, including all applicable health, safety and environmental laws and regulations, and shall keep such records as may be required thereunder. Cedar acknowledges that it has inspected and tested the Process and affirms that it has all technical expertise necessary to: (i) install and operate the equipment described in the Process in a safe and sound manner; and (ii) use the Process to produce Product without causing damage to persons, equipment or the environment.

15.2 Cedar represents and warrants to Aventis that it has obtained all permits, authorizations and licenses necessary for its performance of the operations contemplated herein and the use of the Plant as contemplated hereby, and hereby agrees to comply with all provisions thereof and to maintain and obtain all renewals, reapplications and modifications of all permits, authorizations and licenses necessary or required for such operations.

15.3 Cedar shall ensure that its procedures and means meet appropriate regulatory requirements governing the handling, stocking, labeling and transport of Raw Materials, Non-Strategic Raw Materials and Product and shall observe any recommendations and instructions that Aventis shall communicate to Cedar in respect of the safe manufacture of the Product, handling and use of the Product and the Raw Materials and Non-Strategic Raw Materials, as well as health and protection of the environment.

Article 16. EXCLUSION OF AGENCY, RELATIONSHIP OF THE PARTIES

Each Party hereunder is an independent contractor and neither Party is ~~authorised~~ authorized or empowered to act as agent for the other Party for any purpose, and shall not on behalf of the other Party enter into any contract, undertaking or agreement of any sort or make any promise, warranty or representation.

Article 17. ASSIGNMENT

Neither Party may transfer or assign this Agreement to any Third Party without the prior written consent of the other Party.

Article 18. HEADINGS

The headings to the clauses of this Agreement are for the convenience of reference only, do not form part of this Agreement and shall not in any way affect the construction hereof.

Article 19. NOTICES

19.1. All notices or communications required or permitted to be given under this Agreement shall be in writing in English and shall be valid and sufficient if dispatched by personal delivery, by registered airmail, return receipt requested, or facsimile transmission, and shall be deemed to have been given or made when personally delivered, or when received as evidenced by return receipt or confirmation of facsimile transmission, and addressed to the respective addresses as first indicated herein, for the attention of _____ in the case of Aventis and _____ in the case of Cedar, with a copy to their respective legal departments.

19.2. Any Party may change its address by a notice given to the other Party in the manner set forth above. Notices given as herein provided shall be considered to have been given fourteen (14) days after the mailing thereof.

Article 20. AMENDMENTS; WAIVERS

No amendment of this Agreement or any provisions or terms thereof shall be binding unless recorded in a written document signed by both Parties. No delay, waiver, omission, or forbearance on the part of a Party to exercise any right, option, duty, or power arising out of any breach or default by the other Party under any of the terms, provisions, covenants, or conditions hereof, shall constitute a waiver by such Party to enforce any such right, option, duty, or power as against the other Party, or operate as a waiver of any subsequent breach or default by the other Party.

Article 21. ENTIRE AGREEMENT; SURVIVAL

This Agreement, including the Appendices hereto, sets forth the entire understanding and agreement between the Parties with respect to the subject matter hereof, and cancels and supersedes all previous agreements, promises, representations and understandings, written or oral, between the Parties with respect to the subject matter hereof, including the MOU.

Article 22. SEVERABILITY

If any provision(s) of this Agreement shall, to any extent, be held to be invalid, illegal or unenforceable in any given jurisdiction, or any governmental agency or authority shall require the Parties to delete any provision of this Agreement as a condition of validity, legality or enforceability of the remainder of this Agreement in any given jurisdiction, such invalidity, illegality, unenforceability or deletion shall not impair or affect the remaining provisions of this Agreement or the validity or enforceability of such provision in any other jurisdiction. The Parties shall endeavor through good faith negotiations to replace the invalid, illegal, unenforceable or deleted provision by valid provisions the economic effect of which comes as close as legally possible to that of the invalid, illegal, unenforceable or deleted provision.

IN WITNESS WHEREOF, the Parties hereto have caused this Agreement to be executed by their duly authorised representatives on the day and year set forth below.

**AVENTIS CROPSCIENCE
MATIERES ACTIVES**

**CEDAR CHEMICAL
CORPORATION**

By: _____

By: _____

Name:

Name:

Title:

Title:

Date:

Date:

- Appendix 1 **Capital Improvements**
- Appendix 2 **Raw Material Specifications**
- Appendix 3 **Product Specifications**
- Appendix 4 **Escalation Formula**
- Appendix 5 **Maximum Usage Factors**

Appendix 1 Capital Improvements

Cost Estimate Summary : Cyclanilide Campaign

	Labor	Material	Total
• 1.0 Site work			
Subtotal	\$ 8 400,00	\$ 1 000,00	\$ 9 400,00
• 2.0 Civil			
Subtotal	\$ 23 275,00	\$ 11 500,00	\$ 34 775,00
• 3.0 Reactors (Coiled/ Jacketed)			
Subtotal	\$ 25 550,00	\$ 27 600,00	\$ 53 150,00
• 4.0 Vessels/Tanks			
Subtotal	\$ 5 600,00	\$ 10 000,00	\$ 15 600,00
• 5.0 Heat exchangers			
Subtotal	\$ 1 750,00	\$ 18 000,00	\$ 19 750,00
• 6.0 Rotating Equipment			
Subtotal	\$ 6 300,00	\$ 31 000,00	\$ 37 300,00
• 7.0 Filtering Equipment			
Subtotal	\$ 700,00	\$ 6 000,00	\$ 6 700,00
• 8.0 Piping			
Subtotal	\$ 107 940,00	\$ 91 917,50	\$ 199 857,50
• 9.0 Electric/ Instrumentation			

	Labor	Material	Total
Subtotal	\$ 104 860,00	\$ 158 750,00	\$ 263 610,00
• 10.0 Inspection/ Engineering			
Subtotal	\$ 35 000,00	\$ 0,00	\$ 35 000,00
• 11.0 Rentals & 12.0 Miscellaneous			
Subtotal	\$ 840,00	\$ 6 500,00	\$ 7 340,00
SUBTOTAL	\$ 320 215,00	\$ 362 267,50	\$ 682 482,50
Contingency (10 %)	\$ 32 021,50	\$ 36 226,75	\$ 68 248,25
TOTAL	\$ 352 236,50	\$ 398 494,25	\$ 751 000,00

Appendix 2 Raw Material Specifications

a) 2,4 Di Chloraniline Specifications (For Cyclanilide)

1. ANALYTICAL SPECIFICATIONS

Determinations	Methods of analysis	Specifications (g/Kg)	Frequency
• Appearance	Visual	Molten product colourless to brown	each batch
• Solidification point		60° C min.	each batch
• Purity	Gas chromatography	990 min.	each batch
• Water	Karl Fischer	1 max.	each batch
Process Impurities			
- 2,5 Di chloraniline	Gas chrom.	2 max.	each batch
- 2,6 Di chloraniline	Gas chrom.	1 max.	each batch
- 3,4 Di chloraniline	Gas chrom.	1 max.	each batch
- Others impurities (sum)	Gas chrom.	3 max. (1 max for each)	each batch
- Chlorides		100 ppm max.	

2. PACKAGING

- Steel drum for liquid product.

b) CDM Specifications

1. ANALYTICAL SPECIFICATIONS

Determinations	Methods of analysis	Specifications
• Purity	GC / MS	min. 97,50 %
• Dimethylmalonate	GC / MS	max. 1,00 %
• Dimethylformamide	GC / MS	max. 0,75 %

**c) Sodium Methylate Specifications
Solution 30 % in Methanol**

1. ANALYTICAL SPECIFICATIONS

Determinations	Methods of analysis	Specifications
• Total alkalinity calculated as : NaOCH ₃	Titration	29,5 % - 31,0 %
NaOCH ₃ content	Titration	29,5 % - 30,5 %
• Na ₂ CO ₃ + NaOH content	ISO 6271	Max 0,5 %
• Color		Max 30 APHA

Appendix 3 Product Specifications

Cyclanilide Specifications

1. ANALYTICAL SPECIFICATIONS

Determinations	Methods of analysis	Specifications (g/Kg)	Frequency
• Appearance	Visual	White to yellowish flowing powder	each batch
• CYCLANILIDE content	C.817.06.95	960 min.	each batch
• Water	CIPAC MT 30.1	5 max.	each batch
• Total alkyl aromatics : as o, p, m xylène, and ethyl benzene	C.816.06.95	1 max.	each batch
Process Impurities :			
- RPA 116741 (imp.A)	C.821.07.95	3 max.	each batch
- 2,4 Dichloroaniline	C.821.07.95	1 max.	each batch
- RPA 090 945	C.821.07.95	10 max.	each batch
- RPA 111 030	C.821.07.95	10 max.	each batch
- RPA 114 924	C.821.07.95	15 max.	each batch
- RPA 093 903	C.821.07.95	1 max.	each batch
- RPA 090 899	C.821.07.95	1 max.	each batch

Cross contamination prevention :

All possible impurities from the implementation of an other production in the equipment involved in manufacturing of Cyclanilide, must be identified and quantified.

2. PACKAGING

- Polyéthylène drums : 120 l.
- Net weight : 50 Kg of Cyclanilide

Appendix 4 Escalation Formula

Application commencing in 2002

$$P_{n+1} = P_n \left[0,15 + 0,425 \frac{W_{n+1}}{W_n} + 0,425 \frac{PPI_{n+1}}{PPI_n} \right]$$

- P_{n+1} = Adjusted toll fee for the contract year in \$ / Kg of Cyclanilide.
- P_n = Toll fee of the previous contract year in \$ / Kg of Cyclanilide.
- W_{n+1} = Employment Cost Index published by the US Bureau of Labor Statistic available the month of December preceding the date of adjustment.
- W_n = Employment Cost Index of the previous contract year.
- PPI_{n+1} = Producer Price Index, for the available month of December preceding the date of adjustment :
 - Industry and Product : Industrial Organic Chemical, Code 286.
 - Subcategory : Agricultural Chemical, nbc, other pesticidal preparations primarily for agricultural, Code 2879 - 8.
- PPI_n = Producer Price Index of the previous contract year.

Assignment & Assumption Agreement
w/ Rhone-Poulenc AG

AVENTIS/RHONE POULENC 11/19/1999
Secrecy Agreement Cyclanilide



ASSIGNMENT AND ASSUMPTION AGREEMENT

THIS ASSIGNMENT AND ASSUMPTION AGREEMENT (the "Agreement") is entered into effective as of June 1, 1997, by and between Cedar Chemical Corporation, a Delaware corporation, ("Cedar") and Rhone-Poulenc Ag Company, a Delaware corporation, ("RPAC").

W I T N E S S E T H:

WHEREAS, Cedar and Micro Flo Company, a Georgia corporation, ("Micro Flo") have entered into a Supply Agreement, a true and correct copy of which is attached hereto as Exhibit A (the "Supply Agreement") pursuant to which Cedar is obligated to supply and Micro Flo is obligated to purchase certain quantities of Ethephon (hereinafter "Product") in accordance with the terms and conditions of the Supply Agreement; and

WHEREAS, Cedar has entered into a Memorandum of Understanding with Rhone Poulenc Agrochimie SA, a French corporation, (hereinafter "RPA"), pursuant to which Cedar expects to enter into a definitive agreement to produce certain products for RPA for an extended term (hereinafter referred to as the "Term"), subject, however, to Cedar's being relieved by Micro Flo of its obligations under the Supply Agreement in accordance with the terms hereof; and

WHEREAS, RPAC desires to assume and perform Cedar's obligations under the Supply Agreement with Micro Flo in accordance with the terms and conditions hereof.

NOW, THEREFORE, in consideration of the premises and the mutual covenants set forth herein, the parties agree as follows:

1. Assignment. Subject to the provisions of Paragraph 3 of this Agreement, Cedar hereby assigns to RPAC its entire right, interest and obligations in and under the Supply Agreement effective as of the date first above appearing (the "Effective Date") and continuing thereafter throughout the Term referred to herein, but in any event through October 1997.

2. Assumption. As of the Effective Date, subject to the provisions of Paragraph 3 of this Agreement, RPAC assumes and agrees to perform Cedar's obligations under the Supply Agreement throughout the Term referred to herein, but in any event through October 1997.

3. Inventory. Cedar's entire inventory of Product (the "Inventory") totalling approximately 328,000 pounds on a 100% active ingredient basis as of the Effective Date hereof will be sold to Micro Flo at a price of \$3.63 per pound (the "Purchase Price") by not later than October 1997. The exact quantity of Cedar's Inventory sold to Micro Flo shall be certified to RPAC by Cedar on or before November 15, 1997, which quantity shall be subject to verification and audit by RPAC at its expense. In the event Micro Flo's Net Selling Price (as defined in the Supply Agreement) for the period April through October 1997 shall exceed \$31.00 per pound, RPAC shall sell direct Micro Flo to pay to Cedar such increase in the Purchase Price for that quantity of Inventory sold by Cedar to Micro Flo, as aforesaid, determined in accordance with the schedule set forth on Exhibit B to the Supply Agreement. RPAC shall cause such sum to be paid to Cedar within fifteen (15)

days of the date of determination of the adjusted Purchase Price in accordance with the terms of the Supply Agreement.

4. Commissions. RPAC shall pay to Cedar a commission of \$1.35 per pound for all quantities of Product sold by RPAC to Micro Flo up to 1,250,000 pounds in each calendar year during the Term hereof; provided that, for the 1997 calendar year, Cedar's commissions shall be payable with respect to all quantities of Product sold by RPAC to Micro Flo in said calendar year; provided further that, in said calendar year, RPAC shall pay commissions determined hereunder on no less than 1,250,000 pounds of Product less the number of pounds of Product in Cedar's Inventory sold by Cedar to Micro Flo, as determined in accordance with Paragraph 3 of this Agreement. Commissions hereunder shall be payable to Cedar sixty (60) days from the date of each such shipment to Micro Flo. Any payment required by RPAC in order for its commissions payable for the calendar year 1997 to total the minimum commissions payable in said year, as aforesaid, shall be due and payable to Cedar the 1st day of March, 1998. Cedar's said commission on sales of Product sold to Micro flo in each calendar year during the Term referred to herein shall be increased by the amount by which the price of Product sold by RPAC to Micro Flo shall exceed \$3,63 per pound, as determined under Paragraph 4 of the Supply Agreement, such additional commissions, if any, to be due and payable by RPAC to Cedar within fifteen (15) days following the determination of Micro Flo's Final Net Selling Price under the Supply Agreement in each calendar year during the Term referred to herein. It is understood

that, subject to Cedar and RPA entering into one or more agreements as contemplated under the MOU, this Agreement shall be amended to suspend RPAC's obligation to pay commissions on sales of Micro Flo under the Supply Agreement during each calendar year during the Term hereof following the 1997 calendar year.

5. Reassignment. In the event of the expiration or termination of the Term of Cedar's anticipated contract with RPA prior to December 31, 2006, or, if Cedar and RPA shall not have entered into such a contract by October 31, 1997, RPA shall, immediately upon notice by Cedar, reassign to Cedar its entire right, interest and obligations under the Supply Agreement, and, in that event, Cedar shall reassume and perform all of its obligations thereunder from and after the date of such reassignment, whereupon Cedar's rights and RPAC's obligations under this Agreement shall terminate except for such rights and obligations as shall have accrued as of the Effective Date of such reassignment.

6. Condition Precedent. This Agreement shall be effective only upon Micro Flo's execution and delivery to Cedar and RPAC of the Consent Agreement in the form attached hereto as Exhibit B.

7. Warranties and Covenants.

A. RPAC warrants and covenants as follows:

(1) It has full power and authority to execute and deliver this Agreement and to perform its obligations hereunder. This Agreement constitutes the valid and legally binding obligation of RPAC, enforceable in accordance with its terms.

conditions with respect thereto which are not set forth in said Exhibit A.

8. Indemnification by RPAC. RPAC shall indemnify, defend, and hold harmless Cedar against and in respect of any and all claims, demands, losses, costs, expenses, obligations, liabilities, damages, recoveries, and deficiencies, including reasonable attorney's fees (collectively "Damages"), that Cedar incurs or suffers, which arise, result from, or relate to, any breach of, or failure by RPAC to perform, any of its representations, warranties, covenants or agreements set forth herein.

9. Indemnification by Cedar. Cedar shall indemnify, defend, and hold harmless RPAC against and in respect of any and all claims, demands, losses, costs, expenses, obligations, liabilities, damages, recoveries, and deficiencies, including reasonable attorney's fees (collectively "Damages"), that RPAC incurs or suffers, which arise, result from, or relate to, any breach of, or failure by Cedar to perform, any of its representations, warranties, covenants or agreements set forth herein.

10. Miscellaneous:

A. Survival. All of the representations and warranties of the parties contained in Paragraph 7 of this Agreement shall survive the Effective Date indefinitely.

B. Entire Agreement, Amendments. This Agreement constitutes the entire agreement between the parties and supersedes

(2) Neither the execution and delivery of this Agreement nor the consummation of the transactions contemplated hereby will violate any provision of RPAC's Charter or By-Laws nor conflict with, result in a breach of, constitute a default under, or require any notice under any agreement to which RPAC is a party or by which it is bound.

(3) It will comply fully with the terms of the Supply Agreement assumed by it hereunder, and it will not during the Term hereof enter into any amendment of the Supply Agreement nor otherwise alter or assign the Supply Agreement without Cedar's prior written consent.

B. Cedar warrants and covenants as follows:

(1) It has full power and authority to execute and deliver this Agreement and to perform its obligations hereunder. This Agreement constitutes the valid and legally binding obligation of Cedar, enforceable in accordance with its Terms.

(2) Neither the execution and delivery of this Agreement nor the consummation of the transactions contemplated hereby will violate any provision of Cedar's Charter or By-Laws nor conflict with, result in a breach of, constitute a default under, or require any notice under any agreement to which Cedar is a party or by which it is bound.

(3) The Supply Agreement attached hereto as Exhibit A is in full force and effect; neither Cedar nor Micro Flo is in default of the terms thereof; and there are no terms or

any prior understandings, agreements, or representations by or between the parties, written or oral, to the extent they relate in any way to the subject matter hereof. No amendment of any provision of this Agreement shall be valid unless the same shall be in writing and signed by RPAC and Cedar.

C. Succession and Assignment. This Agreement shall be binding upon and inure to the benefit of the parties named herein and their respective successors and permitted assigns. No party may assign either this Agreement or any of its rights, interest, or obligations hereunder without the prior written approval of the other party.

D. Counterparts. This Agreement may be executed in one or more counterparts, each of which shall be deemed an original but all of which together will constitute one and the same instrument.

E. Headings. The section headings contained in this Agreement are inserted for convenience only and shall not affect in any way the meaning or interpretation of this Agreement.

F. Notices. All notices, requests, demands, claims, and other communications hereunder will be in writing. Any notice, request, demand, claim, or other communication hereunder shall be deemed duly given if it is sent by registered or certified mail, return receipt requested, postage prepaid (and then two business days after), or if it is sent by a nationally-recognized overnight courier service (and then one business day after), and addressed to the intended recipient as set forth below:

If to Cedar:

J. Randal Tomblin
President, Organics
Division
Cedar Chemical Corporation
24th Floor, Clark Tower
5100 Poplar Avenue
Memphis, TN 38137

If to RPAC:

G. Governing Law. This Agreement shall be governed by and construed in accordance with the laws of the State of Delaware, without giving effect to any choice or conflict of law provision or rule.

H. Severability. Any germ or provision of this Agreement that is invalid or unenforceable in any situation in any jurisdiction shall not affect the validity or enforceability of the remaining terms and provisions hereof or the validity or enforceability of the offending term or provision in any other situation or in any other jurisdiction.

EXECUTED by the parties as of the effective date hereof.

ATTEST:

CEDAR CHEMICAL CORPORATION

John Bonpane

BY: J. Randal Tomblin

J.C.
RHONE-POULENC AG COMPANY

BY: [Signature]



5100 Poplar Avenue • Suite 2414 • Memphis, TN 38137 • (901) 685-5348 • Fax (901) 684-5398

J. Randal Tomblin
President and CEO

November 27, 2000

Mr. Jeffrey A. Sorrell
Manager, Sales, Operations &
Inventory Planning
SEDAGRI
2 T.W. Alexander Drive
Research Triangle Park, NC 27709

Re: Ethephon

Dear Jeff:

Enclosed please find two fully executed copies of the Ethephon Agreement. Please have someone in your organization execute on behalf of Aventis CropScience USA LP and return one copy for my files.

As always, I appreciate your diligence in this matter and wish you a great holiday season. I've enjoyed working with you on ethephon over the years and look forward to a similar relationship on cyclanilid.

As confirmed to you via telephone, we have received the payment.

Kindest regards,

A handwritten signature in cursive script that reads "Randal Tomblin".

Randal Tomblin

cc: John Wichtrich

AGREEMENT

THIS AGREEMENT entered into as of the 15th day of November, 2000, by and between Aventis CropScience USA LP ("Aventis"), successor to Rhone Poulenc Ag Company ("R-P") and Cedar Chemical Corporation ("Cedar").

WHEREAS, R-P and Cedar entered into an Assignment and Assumption Agreement dated as of June 1, 1997, (the "Agreement") pursuant to which Cedar assigned to R-P its rights and obligations under that certain Ethephon Supply Agreement between Cedar and MicroFlo Company dated as of January 1, 1996, as amended by Amendment Agreement dated February 18, 1997, and Aventis assumed Cedar's obligations under the Ethephon Supply Agreement and agreed to pay Cedar certain commissions in connection with its performance thereunder; and

WHEREAS, Aventis desires to purchase from Cedar, and prepay Cedar's rights to receive commissions pursuant to the Agreement, and Cedar is willing to accept such prepayment in accordance with the terms and conditions hereof.

NOW, THEREFORE, in consideration of the premises and the mutual covenants contained herein, the parties agree as follows:

1. Aventis shall pay to Cedar the sum of Six Million Dollars (\$6,000,000) on or before December 15, 2000, which payment shall be made by check payable to Cedar for delivery to Cedar's office in Memphis, Tennessee to the attention to J. Randal Tomblin, President, via Federal Express, on the first business day following the full execution of this Agreement and delivery of same to Aventis.

2. Cedar agrees to accept the payment referred to in paragraph 1 of this Agreement in full satisfaction of its rights under the Agreement, including its right to receive commissions thereunder and its right to require that the Ethephon Supply Agreement be reassigned to Cedar in accordance with the terms of the Agreement, and will release R-P and Aventis from all remaining obligations to Cedar under the Agreement accruing on or after the date on which Cedar receives such payment.

3. The undersigned signatories represent that they are duly authorized to execute this Agreement on behalf of the respective parties hereto and that the Agreement, when so executed, shall be binding and enforceable as to said parties and their respective successors and assigns.

EXECUTED as of the date first above appearing.

AVENTIS CROPSCIENCE USA LP

By: *[Signature]*

Title: *VP/CM*

Date: *12/6/00*

CEDAR CHEMICAL CORPORATION

By: *J. Randal Jomler*

Title: *President + CEO*

Date: *Nov 27, 2000*

CONFIDENTIAL**ETHEPHON SUPPLY AGREEMENT**

THIS AGREEMENT, made and entered into as of the first day of January, 1996, by and between **CEDAR CHEMICAL CORPORATION**, a Delaware corporation, with offices at 5100 Poplar Avenue, Suite 2414, Memphis, Tennessee 38137 (hereinafter "Cedar"), and **MICRO FLO COMPANY**, a Georgia corporation, with its principal office located at 5925 Imperial Parkway, Suite 130, Mulberry, Florida 33860 (hereinafter "Micro Flo").

WHEREAS, Cedar presently possesses both technical and end use registrations for the active ingredient Ethephon (hereinafter collectively "Product") from the U.S. Environmental Protection Administration (E.P.A.); and,

WHEREAS, Micro Flo also possess both technical and end use registrations for the Product issued by the E.P.A.; and

WHEREAS, Cedar plans to begin production of the Product at its plant located at West Helena, Arkansas no later than December 31, 1996; and

WHEREAS, Micro Flo desires to purchase from Cedar and Cedar desires to sell on an exclusive basis to Micro Flo during the term of this Agreement certain quantities of Product meeting the specifications attached hereto as Exhibit "A" required by Micro Flo in connection with the production and sale of the Product by Micro Flo in NAFTA countries, all at the price and quantities and in accordance with the terms and conditions contained herein.

NOW, THEREFORE, it is hereby agreed:

1. **TERM**. The term of this Agreement shall be from the date first above written through December 31, 2002, and will automatically be extended for one year increments

from year to year until terminated by either party with at least twelve (12) months written notice in advance of expiration of the initial or renewed term.

2. QUANTITIES. In only the first year of the Agreement (1996), Cedar shall sell to Micro Flo and Micro Flo shall purchase from Cedar a maximum of 300,000 pounds of Product on a 100% Active Ingredient (AI) basis that has been manufactured in the Peoples Republic of China ("China") and shall meet the specifications in Exhibit "A". Micro Flo shall have no obligation with respect to such purchase if Cedar fails to make delivery as scheduled by June 30, 1996, or if the Product fails to meet specifications in any respect.

Beginning the second year of the Agreement (1997) and in each of the remaining contract years, Cedar shall sell to Micro Flo, and Micro Flo shall purchase from Cedar, a minimum of 1,250,000 pounds of Product on an AI basis and Cedar shall sell to Micro Flo and Micro Flo shall purchase from Cedar fifty (50%) percent of Micro Flo's annual requirement in excess of 2,500,000 pounds 100% AI.

The parties recognize that Cedar is presently constructing its manufacturing plant. Except for the 300,000 pounds of Product (AI) that is manufactured in China for 1996, all Product shall be manufactured by Cedar in Cedar's manufacturing facility in West Helena, Arkansas. If Cedar does not have its plant in operation by December 31, 1996, then either party may terminate this Agreement, after which time neither party shall have any claims for damages from the other party.

ON LINE
REAL CAPAC

3. CEDAR REGISTRATIONS. Upon execution of this Agreement, Cedar shall cancel its E.P.A. registration #'s 56077-50 and 56077-51 for Technical Ethephon and Cedar shall transfer to Micro Flo all of Cedar's rights, title and interest in and to Cedar's End Use Label E.P.A. registration #56077-49, which is marketed under the trade name "Pluck". Such transfer shall be executed in accordance with 40 C.F.R. §152.135, and both Cedar and Micro Flo shall execute and deliver such documents and shall take such additional actions as may be necessary to effectuate such transfer. Consequently, Cedar will supply Micro Flo

★
HAS THIS HAPPENED?

MAY-13-57 6:04 PM FROM: 10: 5045 7:17

under Micro Flo's E.P.A. Technical Ethephon registration. The sole consideration for such transfer shall be the execution of this Supply Agreement by Micro Flo.

4. **PRICE.** In the first contract year, the initial billing price for the Product will be \$4.09 per pound (AI), F.O.B. Cedar's West Helena, Arkansas manufacturing plant. Payment terms on invoices for all Product will be due and payable sixty (60) days from the date of shipment.

No later than January 15th of each contract year, or thirty (30) days after notification from Micro Flo of Micro Flo's Final Net Selling Price ("NSP") of Ethephon 6, whichever date is later, an adjustment in the price of Product shall be made, if necessary, said adjustment to be based on Micro Flo's NSP defined as Micro Flo's average invoice price to its customers, less any rebates, freight and warehouse allowances, adjustments, and free goods, sold during the immediately preceding period from April through October. The final price due from Micro Flo shall be based on the attached Exhibit "B". Payment of the adjustment by Micro Flo to Cedar or by Cedar to Micro Flo will be made within fifteen (15) days of the determination of the adjustment amount. The final adjusted price of Product for any given year will be the initial billing price for the next contract year, said price to once again be subject to the same adjustment as specified in the first contract year.

Beginning in the second full year of production, and each year thereafter, the price of Product will be increased or decreased to reflect the actual documented increase or decrease in the direct cost of the raw materials on Exhibit "C", said Product price increase not to exceed 5% of the prior year's adjusted price.

Upon thirty (30) days written notice either party shall have the right to audit the other party's books at their principal place of business to confirm Micro Flo's NSP or Cedar's increase or decrease in raw material costs, said audit to be at the expense of the requesting party.

5. **HARDSHIP.** In the event that Micro Flo's NSP for Ethephon 6 in any contract year is less than \$32.00 per gallon, Micro Flo and Cedar agree to negotiate equitable changes.

If Micro Flo and Cedar are unable to reach agreement on pricing, then either party will be relieved of any further obligation to sell or purchase the Product at the end of the current contract year.

6. DELIVERIES. In the first year of the Agreement, with respect to the 300,000 pounds (AI) of Product manufactured in China, which shall meet the specifications in Exhibit "A", to be purchased by Micro Flo, the delivery of the entire 300,000 pounds is to be made by June 30, 1996.

In each of the remaining years of the Agreement, with respect to the minimum of 1,250,000 pounds of the AI of the Product to be purchased by Micro Flo during each remaining contract year, the delivery schedule shall be as follows:

- (a) 250,000 pounds by May 15
- (b) 250,000 pounds by June 15
- (c) 250,000 pounds by July 15
- (d) 250,000 pounds by August 15
- (e) 250,000 pounds by September 15

*Invoice
1st 1/2*

The earliest shipment of the Product with respect to a particular contract year shall not be delivered prior to April 15 and the entire minimum of 1,250,000 pounds of the Product shall be delivered no later than September 15.

Micro Flo and Cedar will meet in the 4th quarter of each year to discuss Micro Flo's requirement for the next contract year and agree upon any quantity of Product that may be available in excess of Micro Flo's requirement, said excess quantity to be sold only by Micro Flo. Cedar or its affiliates shall not sell, manufacture or license Product, including any variation or improvement thereof, to or for any other party, for sale or use in NAFTA countries, without Micro Flo's expressed written consent. Prior to December 31 of each Contract Year, Micro Flo shall provide its best estimate of the quantity of Product it intends to purchase during the Contract Year beginning January 1, including such excess

quantity, in approximately equal amounts during the period April through September of that year.

Micro Flo shall be entitled to alter its purchase quantity upon sixty (60) days written notice prior to any scheduled production, but in no event will Micro Flo's total quantity fall below the requirements outlined in Section 2 above. Cedar agrees that it will make its best efforts to supply any additional quantity of Product that Micro Flo requests.

Time is of the essence with regard to all delivery dates. Micro Flo reserves the right to inspect and, as applicable, reject deliveries which do not conform to specifications.

7. WARRANTY. Cedar warrants title to the product sold hereunder, and that the Product shall meet the specifications set forth in Exhibit "A" and shall be free of defects or impurities, except for those within the range of tolerance set forth in the specifications in Exhibit "A", and shall be produced in compliance with all applicable federal, state, and local laws, ordinances, rules, regulations, and executive orders. CEDAR MAKES NO OTHER REPRESENTATION OR WARRANTY OF ANY KIND, EXPRESS OR IMPLIED, WHETHER TO MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, OR AS TO ANY OTHER MATTER.

8. INDEMNIFICATION. Micro Flo agrees to indemnify Cedar and hold it harmless from and against any loss, liability, damage, expenses, costs, and fees (including reasonable attorneys fees), which Cedar may suffer as a result of any claim or cause of action asserted against Cedar arising out of or in any way connected with the use, handling, storage or transportation of the Product sold hereunder after such Product has been delivered to Micro Flo or its designees in accordance with Micro Flo's instructions pursuant to this Agreement.

Cedar agrees to indemnify and hold Micro Flo harmless from and against any loss, liability, damage, expenses, costs, and fees (including reasonable attorney's fees), based upon or arising out of or in any way connected with the production, handling, storage or transportation of the Product before such Product has been delivered to Micro Flo or its

designees, as well as Cedar's breach of its warranties hereunder. Cedar's breach of this Agreement or Cedar's violation of any law or regulations, including without limitation, FIFRA, relating to any of the Ethephon supplied or manufactured by Cedar and purchased by Micro Flo. This Agreement provides for the sale of Product by Cedar to Micro Flo and is not a specification of activities or of production to be carried on by Cedar all of which shall be under Cedar's discretion and control, and shall be Cedar's sole responsibility.

9. FORCE MAJEURE. Each of the parties hereto shall be excused from performing its obligations hereunder due to any act of God, fire, casualty, flood, war, strike, lock out, failure of public utilities, injunction, any act, exercise, assertion, or requirement of governmental authority, epidemic, destruction of production facilities, insurrection, raw material shortages, labor, equipment, transportation or energy sufficient to meet manufacturing needs, customer boycotts or market limitation, or any other cause beyond the reasonable control of the party invoking this provision, provided that prompt notice thereof be given to the other party, and provided further that prompt and reasonable efforts are made to overcome such event or condition causing such inability to perform.

10. APPLICABLE LAW. The Agreement shall be construed and interpreted in accordance with the laws of the State of Georgia.

11. NOTICES. Any notice required hereunder shall be mailed, postage prepaid, by registered or certified mail, return receipt requested, or by overnight courier service, in either case with a copy transmitted by same day facsimile transmission, addressed to the receiving party at the following address:

For Cedar: Craig Keese, Vice President
Cedar Chemical Corporation
Clark Tower, Suite 2414
5100 Poplar Avenue
Memphis, TN 38137

For Micro Flo: Keith Hobbs, Vice President
Micro Flo Company
5925 Imperial Parkway, Suite 130
Mulberry, FL 33860

Either party, may by notice to the other, change its address for receiving such notice or the designee to receive such notice.

12. DEFAULT AND DISPUTE RESOLUTION. Any dispute which arises out of this Agreement shall be resolved between the parties if at all possible. If the parties can not resolve such dispute within thirty (30) days after the dispute arises or such other period of time to which both parties agree, then the dispute shall be referred for arbitration in accordance with the Commercial Arbitration Rules of the American Arbitration Association. The decision of the arbitrator shall be binding, and judgment upon any award rendered by the arbitrator may be entered in any court having jurisdiction thereof.

13. NON-ASSIGNABILITY. Neither party may assign its rights or obligations under this Agreement without the written consent of the non-assigning party except that the assigning party (the "Seller") may assign its rights and obligations to any purchaser of all or substantially all of the assets and the business of Seller, provided that the purchaser of the assets and the business shall be obligated to assume the obligations of the Seller.

14. WAIVER. The waiver by either party of a breach or a default of any provision of this Agreement by the other party shall not be construed as a waiver of any succeeding breach of the same or of any other provision, nor shall any delay or omission on the part of either party to exercise or avail itself of any right, power, or privilege that it has, or may have hereunder, operate as a waiver of any right, power, or privilege by such party.

15. NO AGENCY. Nothing in this Agreement shall be deemed to constitute either party as an agent, joint venturer, partner or representative of the other party.

16. TERMINATION. Either party may terminate this Agreement for failure of the other party to comply with the terms and conditions hereof effective not earlier than thirty (30) days following notice to such party setting out the full particulars of the alleged breach, provided that such breach remains uncured at the end of the thirty (30) day period.

17. ENTIRE AGREEMENT. There is no right or obligation of either party expressed or implied except as expressly set forth in this Agreement.

IN WITNESS WHEREOF, the parties hereto have caused this Agreement to be executed by their respective duly authorized officers on the day and year first above written.

ATTEST:

CEDAR CHEMICAL CORPORATION

Jay Wilbanks

By: *William P. [Signature]*

ATTEST:

MICRO FLO COMPANY

Gandy Keya

By: *[Signature]*
VP & FINANCE

ETHEPHON 65% MUP

PRODUCT SPECIFICATIONS

CHEMICAL:

<u>COMPONENT</u>	<u>INGREDIENT CERTIFIED LIMITS - % W/W</u>		
	<u>Lower Limit</u>	<u>Nominal Limit</u>	<u>Upper Limit</u>
Ethephon (2-chloroethyl phosphonic acid)	63.500	65.500	70.000
Phosphoric acid	0.200	0.500	0.800
Phosphonic acid	0.200	0.400	0.800
(2-chloroethyl) Phosphonic acid mono-(2-chloroethyl) ester	0.000	0.100	0.200
2-Chloroethanol	0.003	0.004	0.006
Water	25.500	27.300	28.100
Other Related Hydrogenated Phosphorochloride Impurities	5.1	<u>6.196</u> 100.00 %	7.3

PHYSICAL:

COLOR	Colorless to slight yellow liquid with no visible particulates.
ODOR	Slight hydrochloric acid scent.
BOILING POINT	100 degrees Celsius @ 760 mm Hg.
SPECIFIC GRAVITY	1.35 - 1.40 g/ml @ 25 degrees Celsius.
pH	1.25 - 1.45 @ 25 degrees Celsius.
SOLUBILITY	> 200g/100 ml of water @ 25 degrees Celsius. > 200 g/100 ml of methanol @ 25 degrees Celsius. 3 g/100 ml of chloroform.
VAPOR PRESSURE	< 1 x 10 ⁻⁷ torr
DISSOCIATION CONSTANT	pK = 1.9 and 6.9 for pure product.
VISCOSITY	30 - 40 cps @ 25 degrees Celsius (Synchro-Lectric Viscometer).

We reserve the right to modify or supplement the specifications to conform to changes in legal requirements.

EXHIBIT "B"

PRICE OF ETHEPHON TECHNICAL

<u>MICRO FLO'S NET SELLING PRICE</u> (Rounded to the nearest dollar)				<u>PRICE OF ETHEPHON TECHNICAL</u>				
	<i>RP MSP</i>					<i>COGS</i>	<i>COGS %</i>	
\$45.00	7.46	4.12	\$4.22	4				
\$44.00	7.30	4.11	\$4.17	5				
\$43.00	7.13	4.09	\$4.13	4				
\$42.00	6.97	4.07	\$4.09	4				
\$41.00	6.80	4.05	\$4.05	4				
\$40.00	6.63		\$4.01	4				
\$39.00	6.47		\$3.97	4	23.94	61.70	39.0	
\$38.00	6.30		\$3.92	5				
\$37.00	6.14		\$3.88	4				
\$36.00	5.97		\$3.84	4				
\$35.00	5.80		\$3.80	4	22.91	65.70	35.0	
\$34.00	5.64		\$3.76	4				
\$33.00	5.47		\$3.72	4				
\$32.00	5.31		\$3.67	5				
\$31.00	5.14		\$3.63	4				
\$30.00	4.98		\$3.59	4	21.64	72.70	30.0	

Above prices subject to increase or decrease based on Cedar's actual increase or decrease in raw material prices, such increase not to exceed 5% of the prior price.

EXHIBIT "C"

LIST OF RAW MATERIALS

Phosphorous Trichloride

Ethylene Oxide

Anhydrous Hydrochloric Acid

CONFIDENTIAL**AMENDMENT AGREEMENT**

THIS AMENDMENT AGREEMENT (the "Amendment") effective this date, February 18, 1997, by and between **MICRO FLO COMPANY**, a Georgia Corporation, with its principal office located at 5925 Imperial Parkway, Suite 130, Mulberry, Florida 33860 (hereinafter "Micro Flo"), and **CEDAR CHEMICAL CORPORATION**, a Delaware corporation, with its principal office located at 5100 Poplar Avenue, Suite 2414, Memphis, Tennessee 38137 (hereinafter "Cedar").

WHEREAS, Micro Flo and Cedar entered into an Agreement (hereinafter "Agreement") dated January 1, 1996, extending through December 31, 2002 with renewable provisions whereby Cedar agreed to sell Micro Flo the Product as defined therein.

WHEREAS, Micro Flo agreed to purchase quantities of Product as provided in the Agreement.

WHEREAS, Micro Flo and Cedar desire to extend the existing Agreement under conditions acceptable to both parties.

NOW THEREFORE, in consideration the premises and mutual covenant contained herein, the parties agree as follows:

1. Section 1 of the Agreement is hereby modified to extend the term of the Agreement through December 31, 2006.
2. Section 2 of the Agreement is hereby modified to include the additional statement:

"Although Micro Flo's obligations shall remain as provided in the original Agreement, Micro Flo desires for Cedar to make available at least 1,750,000 pounds (100% basis) of Product each year. Cedar agrees to make available to Micro Flo up to that full amount, as required by Micro Flo from time to time."

3. Section 6 of the Agreement is modified to the following delivery schedule:
 - (a) 350,000 pounds by May 15
 - (b) 350,000 pounds by June 15
 - (c) 350,000 pounds by July 15
 - (d) 350,000 pounds by August 15
 - (e) 350,000 pounds by September 15

- 4. Except to the extent expressly modified by the foregoing provisions, the Agreement shall remain in full force and effect in accordance with its terms.

CEDAR CHEMICAL CORPORATION

By: Randall Jomtien
President

MICRO-FLO COMPANY

By: [Signature]
V.P. of Finance



5100 Poplar Avenue • Suite 2414 • Memphis, TN 38137 • (901) 685-5348 • Fax (901) 684-5398

Facsimile

Fch

To: Jeff Sorrell

Company: Sedagri

Fax No.: (919) 549-2200

From: Randal Tomblin

Date: November 13, 2000

cc:

No Pages: 3 (including cover sheet)

Dear Jeff:

I sent the draft agreement to our counsel, and he did not understand that he was simply to review the one sent by you. He thought that I had drawn it up and proceeded to make "lawyerly" changes.

Since he's already done it, I thought I would send it to you for review and comparison. Quite frankly, I'll sign whichever you prefer. Just let me know.

Randal Tomblin

Randal

CONFIDENTIALITY NOTICE

This facsimile transmission is intended for the addressee named above. It may contain information that is privileged, confidential, or otherwise protected from use and disclosure. If you are not the intended recipient, you are hereby notified that any review, disclosure, copying, or dissemination of this transmission or the taking of any action in reliance on its contents, or other use is strictly forbidden. If you have received this transmission in error, please notify us by telephone immediately so we can arrange for its return to us. Thank you for your cooperation.

AGREEMENT

THIS AGREEMENT entered into as of the 15th day of November, 2000, by and between Aventis CropScience USA LP ("Aventis"), successor to Rhone Poulenc Ag Company ("R-P") and Cedar Chemical Corporation ("Cedar").

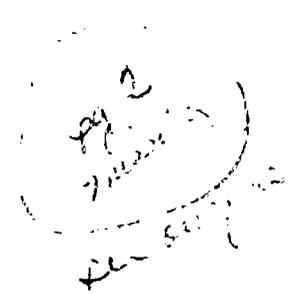
WHEREAS, R-P and Cedar entered into an Assignment and Assumption Agreement dated as of June 1, 1997, (the "Agreement") pursuant to which Cedar assigned to R-P its rights and obligations under that certain Ethephon Supply Agreement between Cedar and MicroFlo Company dated as of January 1, 1996, as amended by Amendment Agreement dated February 18, 1997, and Aventis assumed Cedar's obligations under the Ethephon Supply Agreement and agreed to pay Cedar certain commissions in connection with its performance thereunder; and

WHEREAS, Aventis desires to purchase from Cedar, and prepay Cedar's rights to receive commissions pursuant to the Agreement, and Cedar is willing to accept such prepayment in accordance with the terms and conditions hereof.

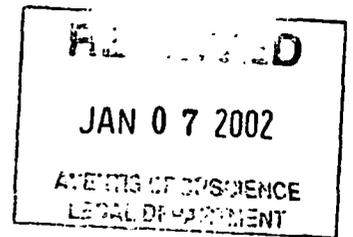
NOW, THEREFORE, in consideration of the premises and the mutual covenants contained herein, the parties agree as follows:

1. Aventis shall pay to Cedar the sum of Six Million Dollars (\$6,000,000) on or before December 15, 2000, which payment shall be made by check payable to Cedar for delivery to Cedar's office in Memphis, Tennessee to the attention to J. Randal Tomblin, President, via Federal Express, on the first business day following the full execution of this Agreement and delivery of same to Aventis.

2. Cedar agrees to accept the payment referred to in paragraph 1 of this Agreement in full satisfaction of its rights under the Agreement, including its right to receive commissions thereunder and its right to require that the Ethephon Supply Agreement be reassigned to Cedar in accordance with the terms of the Agreement, and will release R-P and Aventis from all remaining obligations to Cedar under the Agreement accruing on or after the date on which Cedar receives such payment.



January 2, 2002



Subject: Ethephon Supply Agreement to Micro Flo

Len,

As you may recall, we discussed the potential reaction of Micro Flo to our revised ethephon offer, intended to "keep them whole" under the terms of their original contract with Cedar Chemical. I received the attached letter from them today.

I would like for you to review this note, as well as the Cedar supply agreement, so that we may formulate an adequate response.

In a separate phone conversation, I was alerted to the fact that MF still wishes to purchase their ethephon from Aventis, but this is their way of letting us know that they are not happy with the contract they signed. I intend to continue negotiating with my contact there, but feel that it is important that they receive a legal opinion from us as well as to the enforceability of the current contract.

Thanks for you help,

Jeff Sorrell

MICRO ↓ FLO
THE PLANT HEALTH AND PROTECTION COMPANY

December 28, 2001

Re: **Ethephon Supply Agreement dated January 1, 1996 by and between Micro Flo Company ("Micro Flo") and Cedar Chemical Corporation ("Cedar"), as amended on February 18, 1997 (the "Agreement")**

Gentlemen:

Micro Flo has advised Aventis, the assignee of the Agreement, that Micro Flo's NSP for Ethephon 6 (as defined in the Agreement) has dropped below \$32.00 per gallon. The parties have met to negotiate the matter, but have been unable to reach agreement on revised pricing. Therefore, Micro Flo hereby invokes the right granted under Article 5 of the Agreement, and is providing notice that it will terminate the Agreement effective at the end of the current contract year, viz. December 31, 2001. Under the terms of Article 5, Micro Flo will be relieved of any further obligation to purchase Ethephon as of such date.

Micro Flo Company, L.L.C.

By: 

Title: VP SUPPLY chain

2/28/2001 original to Jeff Sorrell
cc to Len Castillo



RHONE-POULENC AGRO

14-20, RUE PIERRE BAIZET B.P. 9163
69263 LYON CEDEX 09
TÉL. 04 72 85 25 25 - FAX 04 72 85 27 99
TLX 310 098 F RHONE

Hold —

CEDAR CHEMICAL CORPORATION
5100 Poplar Avenue, Suite 2414
Memphis, TN 38137 (U.S.A.)
Attn : **J. Randal Tomblin**

Lyon, le

April, 1st, 1998

Subject Matter : Extension of Term

Dear Mr. Tomblin,

Reference is made to certain Memorandum of Understanding (hereinafter referred to as the "MOU") dated August 13, 1997 between Rhône-Poulenc Agro (hereinafter referred to as "RPA") and Cedar Chemical Corporation which provides the basis for discussions in relation to the supply by Cedar of various intermediates of interest to RPA. The MOU has been amended on December 1st, 1997 to extend its term up to March 31, 1998 inclusive.

The purpose of this letter is for the Parties hereto to extend the term of the above-mentioned MOU up to December 31, 1998 inclusive. The provisions of Article 11 of said Memorandum of understanding are therefore modified accordingly. All other terms and conditions remain unchanged.

If you agree with the terms of the present letter, please return one fully executed original (two are enclosed for such purpose) to RPA's Legal Department , for the attention of Mrs Pyrée.

Yours sincerely,

For and on behalf of
Rhône-Poulenc Agro

A handwritten signature in black ink, appearing to read 'P. Housset', written over the typed name.

P. HOUSSET
Executive Vice-President

Acknowledged and agreed for and on behalf
of Cedar Chemical Corporation

A handwritten signature in black ink, appearing to read 'J. Randal Tomblin', written over the typed name.

J. Randal TOMBLIN
President

FAX

Date 05/15/97

Number of pages including cover sheet

TO: Randal Tomblin
Cedar Chemical Corporation
5100, Poplar Avenue,
Suite 2414
Memphis
TN 38137

Phone 901 685 5348

901 684 5398

FROM: Alan Reade
Rhone-Poulenc

Phone 919 942 3608

Fax Phone 919 933 3611

CC: Jeff Sorrell

REMARKS: Urgent For your review Reply ASAP Please Comment

Dear Randal,

Thank you for you fax .

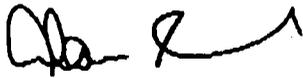
We would be in a position to accept assignment of the Cedar/Microflo supply agreement but only under the following basic terms:

- an assignment period from May 1997 through October 1997
- payment of commission to Cedar of \$1.35 per lb. on the minimum quantity of 1,250,000Lbs (i.e. \$1,687,500 on the fully executed contract)
- a reduction in the 3,4-DCA to 3,4-DCPI of \$200,000 would be subject to as agreement executed between RP Agro and Cedar. We do understand, however, that this would be agreeable to them.
- if RP purchases Cedar's existing inventory of tech it is agreed that the transfer price should be \$3.63 lb (100% ai) subject to it meeting RP's technical specification. The quantity transferred from Cedar would be deducted from RP's obligation to pay commission to Cedar. In other words if the quantity transferred was 300,000 lb. the commission obligation would be reduced to 950,000 lb. x \$1.35.
- all commission payment are to be subject to Microflo executing the supply agreement..

I think it is important that we agree on the above basis before counsel drafts agreements.

I will try and contact you on Friday morning.

Regards



Linda,

please pass to Jeff Sorrell asap.

Thanks.





5100 Poplar Avenue • Suite 2414 • Memphis, TN 38137 • (901) 685-5348 • Fax (901) 684-5398

J. Randal Tomblin
President
Organic Chemicals

May 15, 1997

CONFIDENTIAL

Mr. Alan Reade
Vice President/General Manager
Rhone-Poulenc Ag Company
P. O. Box 12014, #2 T.W. Alexander Drive
Research Triangle Park, NC 27709

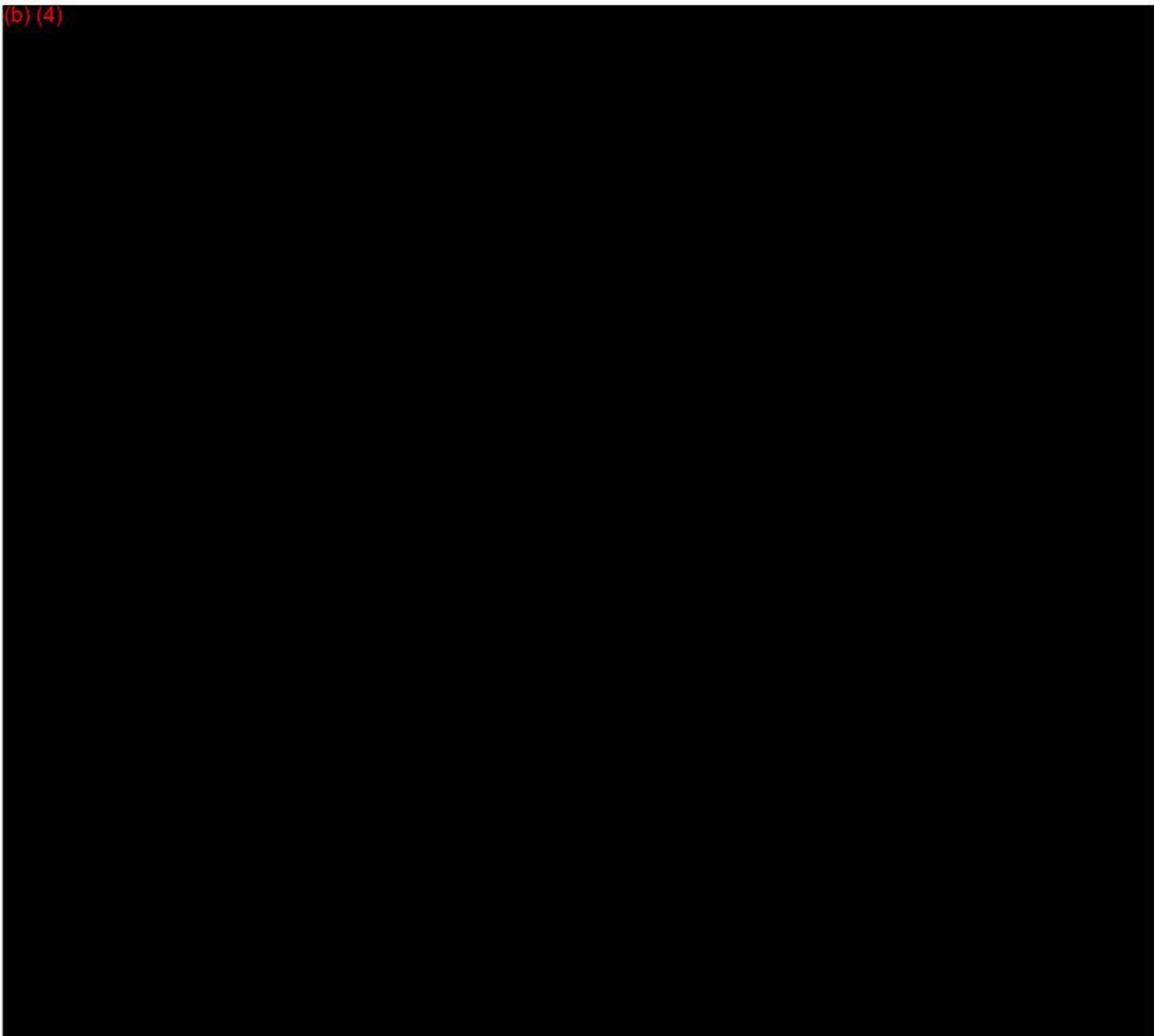
Re: Ethephon

Dear Alan:

(b) (4)

A large, solid black rectangular redaction box covers the majority of the page, starting below the salutation and extending to the bottom and right edges. The text "(b) (4)" is printed in red at the top left corner of this redacted area.

(b) (4)



Regards,

Randal Tomblin

J. Randal Tomblin

Accepted: _____

Alan Reade

JRT:pc
JRT-12-97

cc: Jeffrey Sorrell, Rhone-Poulenc Ag Company

MEMORANDUM OF UNDERSTANDING

THIS MEMORANDUM OF UNDERSTANDING is made and entered as of the date last below written by and between

Rhône-Poulenc Agrochimie, a French société anonyme, with a capital of 1 431.515.000 French Francs, having its registered office at 14/20, rue Pierre Baizet -69009 LYON- France, registered in Lyon under number B 969 503 309, hereinafter referred to as "RPA",

and

Cedar Chemical Corporation, a corporation duly incorporated under the laws of the State of Delaware and having its principal offices at 5100 Poplar Avenue, suite 2414, Memphis, TN 38137, United States, hereinafter referred to as "CEDAR",

Witnesseth:

- ◆ WHEREAS, RPA has a need for a supply source for various intermediates to be used in the manufacture of RPA strategic active ingredients;
- ◆ WHEREAS, CEDAR has a facility capable of manufacturing intermediates and is willing to enter into a supply arrangement with RPA;
- ◆ WHEREAS, it is understood and agreed that, subject to paragraph 10 below, RPA and CEDAR will commence negotiations with each other in good faith forthwith with an intent to reach an agreement or agreements in writing, satisfactory in form and substance to their respective managements reflecting the principles set forth herein.

NOW, THEREFORE, in consideration of the premises and the terms and conditions herein contained the Parties have agreed as follows:

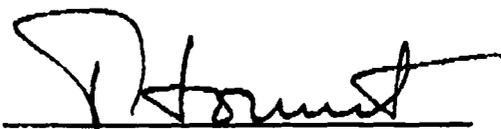
to MICRO FLO in 1997 according to the aforesaid Agreement and Assumption Agreement. For the 1997 calendar year, CEDAR's commissions shall be payable only with respect to 1,250,000 pounds, less the number of pounds in CEDAR's inventory as of July, 1 1997 purchased by RPAC in accordance with the Assignment and Assumption Agreement.

RPA shall report to CEDAR on the 10th day of each calendar month during 1997 all sales of Product by RPAC to MICRO FLO during the immediately preceding month. Commissions hereunder shall be payable to CEDAR sixty (60) days from the date of shipment to MICRO FLO. CEDAR's said commission on sales of Product by RPAC to MICRO FLO during 1997 shall be increased by the amount by which the price of Product sold by RPAC to MICRO FLO shall exceed \$3.63 per pound (100% basis) as determined under Paragraph four (4) of the Ethephon Supply Agreement, such additional commission to be due and payable by RPA to CEDAR within fifteen (15) days following the determination of MICRO FLO's Net Selling Price under the Supply Agreement.

5. The Parties also agree that, should any trial production of the Intermediates prove unsatisfactory, they may analyse the feasibility of toll manufacturing cyclanilid at CEDAR's facility in West Helena, Arkansas. Such study should be completed during the 1997 calendar year.
6. As soon as practicable after the signature of this Agreement, RPA shall submit to CEDAR the terms and conditions under which it proposes for CEDAR to supply it with intermediates. If no formal agreement of the type contemplated herein is put in place by the end of October 1997 or such other date as the parties may agree, either Party shall have the right to terminate this Memorandum of Understanding. RPA and CEDAR must, in that case, mutually determine whether the Ethephon Supply Agreement be reassigned to CEDAR, or whether RPA will continue to supply Product to MICRO FLO with a continuing obligation to pay commissions earned through the term of the aforesaid Assignment and Assumption Agreement, in accordance with Paragraph 4 of this Memorandum of Understanding.
7. Unless otherwise agreed, the Parties agree that neither Party shall make any public announcement of the existence of, or the matters referred to in, this Memorandum of Understanding.

8. This Memorandum of Understanding is subject to the conclusion of definitive agreement(s) mutually acceptable and binding upon the Parties. Except for paragraph 7 above, it shall not commit either of the Parties to the other nor have any binding legal effect on the Parties hereto until such time as they are signed. Accordingly, neither Party shall incur any liability, financial or otherwise, to the other hereunder should they fail to achieve the purpose contemplated herein.
9. This Memorandum of Understanding shall be governed by, and construed and interpreted in accordance with the law of the State of Arkansas. Any dispute or proceeding arising out of or relating to this Memorandum of Understanding shall be referred to arbitration by a single arbitrator appointed in accordance with, and applying, the Rules of Conciliation and Arbitration of the International Chamber of Commerce.
10. This Memorandum of Understanding may only be amended, modified or waived by a separate written document signed by the Parties.
11. This Memorandum of Understanding shall become effective on the date last below written and shall remain valid until the signature of the contemplated agreement or agreements which shall occur not later than the end of October 1997. At such date this Memorandum shall automatically expire.

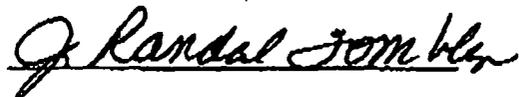
NOW THEREFORE, the Parties have caused this document to be executed in duplicate by their duly authorized representatives as of the dates indicated below.

Rhône-Poulenc Agrochimie

Name : P. Housset

Titre : Executive Vice President

Date :

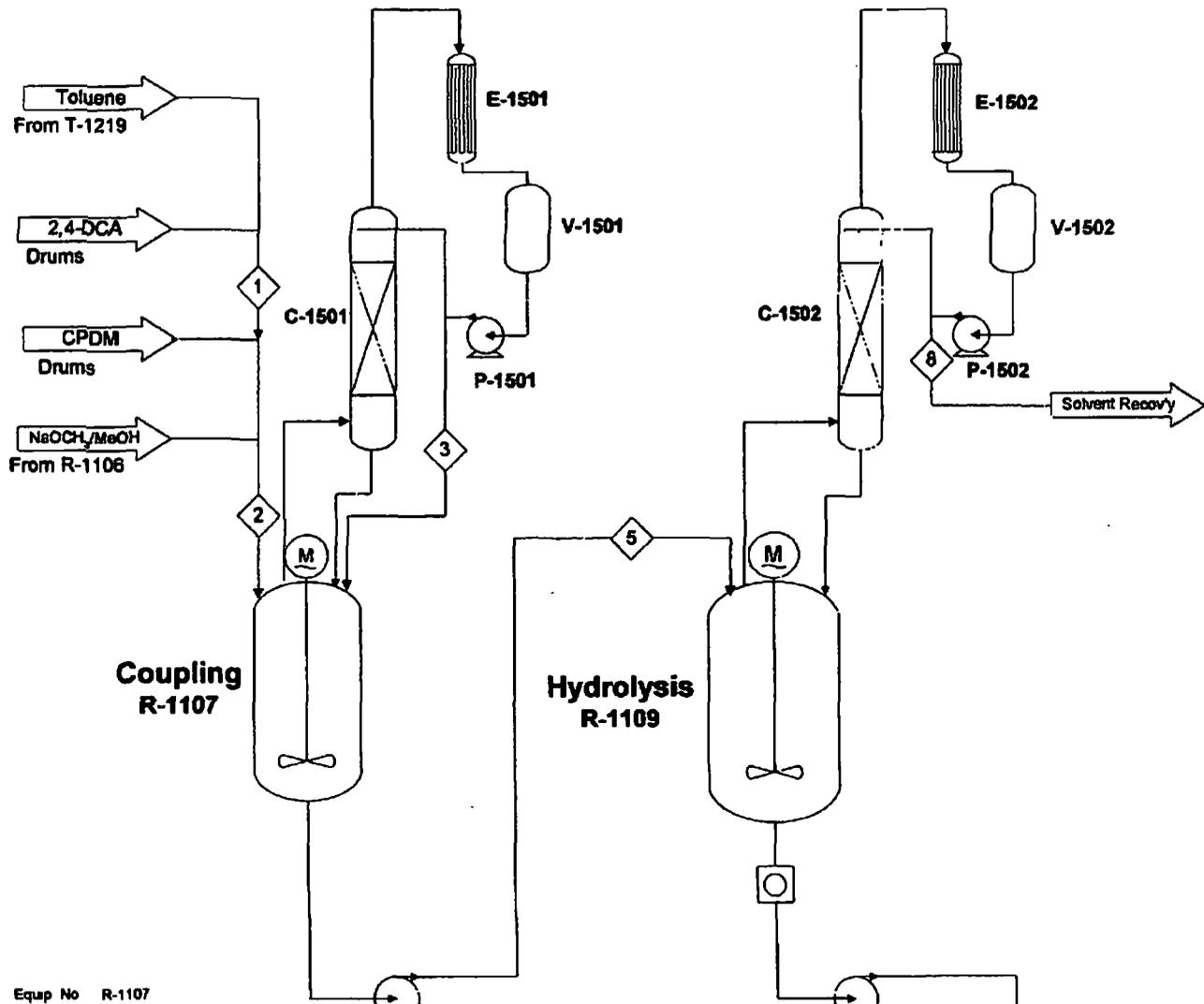
Cedar Chemical Corporation

Name : J. Randal Tomblin

Title : President

Date : Aug 13, 1997

Please:
on any good
back original
to Jeff Smith



Equip No C-1501 (NEW)
 Service Coupling Column
 Capacity 24" dia x 10' T/T
 Material 316L SS
 HP N/A
 RPM N/A
 Rated Temperature 400°F
 Rated Pressure 30 psig & FV

Equip No. C-1502 (NEW)
 Service Coupling Column
 Capacity 24" dia x 10' T/T
 Material 316L SS
 HP N/A
 RPM N/A
 Rated Temperature 400°F
 Rated Pressure 30 psig & FV

Equip No E-1501 (NEW)
 Service Coupling Condenser
 Capacity 300 sq. ft.
 Material 316LSS tube/CS shell
 HP N/A
 RPM N/A
 Rated Temperature 400°F
 Rated Pressure 30 psig & FV

Equip No. E-1502 (NEW)
 Service Coupling Condenser
 Capacity 300 sq. ft.
 Material 316LSS tube/CS shell
 HP N/A
 RPM N/A
 Rated Temperature 400°F
 Rated Pressure 30 psig & FV

Equip No V-1501 (NEW)
 Service Coupling Receiver
 Capacity 350 gal
 Material 316L SS
 HP N/A
 RPM N/A
 Rated Temperature 400°F
 Rated Pressure 30 psig & FV

Equip. No. V-1502 (NEW)
 Service Coupling Receiver
 Capacity 350 gal
 Material 316L SS
 HP N/A
 RPM N/A
 Rated Temperature 400°F
 Rated Pressure 30 psig & FV

Equip No. P-1501 (NEW)
 Service Coupling Recv'r Pump
 Capacity 30 gpm @ 40' TDH
 Material 316 SS
 HP TBD
 RPM TBD
 Rated Temperature <>°F
 Rated Pressure <>psig

Equip No P-1502 (NEW)
 Service Coupling Recv'r Pump
 Capacity 30 gpm @ 40' TDH
 Material 316 SS
 HP TBD
 RPM TBD
 Rated Temperature <>°F
 Rated Pressure <>psig

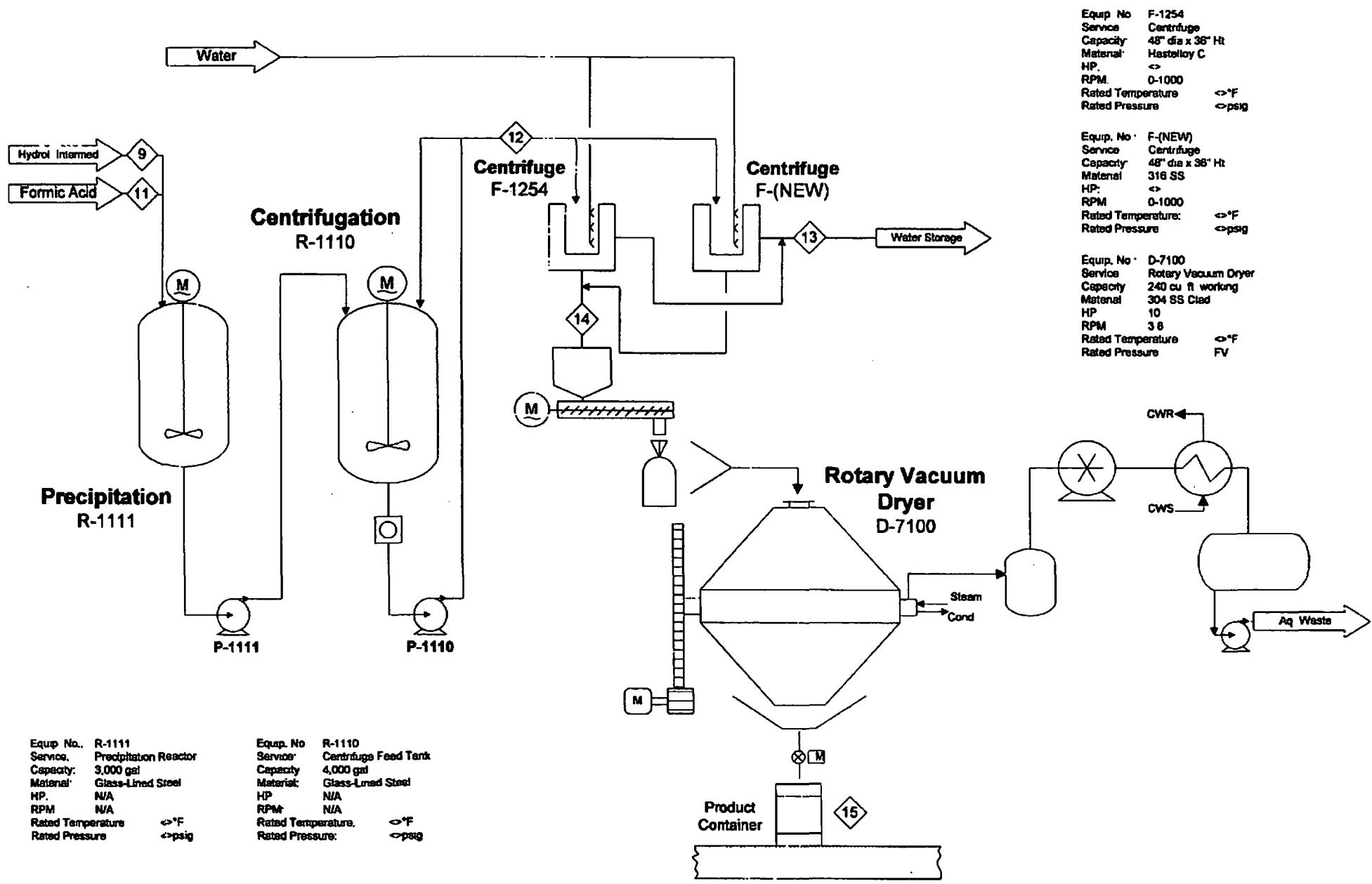
Equip No R-1107
 Service Coupling Reactor
 Capacity 3,000 gal
 Material Glass-Lined Steel
 HP N/A
 RPM N/A
 Rated Temperature <>°F
 Rated Pressure <>psig

Equip No R-1109
 Service Hydrolysis Reactor
 Capacity 4,000 gal
 Material Hastelloy C
 HP N/A
 RPM N/A
 Rated Temperature <>°F
 Rated Pressure <>psig

Equip. No. P-1107 (NEW)
 Service Coupling Transfer
 Capacity 150 gpm @ 70' TDH
 Material 316 SS
 HP TBD
 RPM TBD
 Rated Temperature 400°F
 Rated Pressure TBD

Equip. No. P-1109
 Service Hydrolysis Transfer
 Capacity 300 gpm @ 94' TDH
 Material Hastelloy C
 HP <>
 RPM <>
 Rated Temperature <>°F
 Rated Pressure <>psig

	Title: Cyclanilide 90946 Process Flow Diagram		
	Page 1 of 4 Pages		
Drawn: DCG	Scale: None	Date: 03/15/00	Rev: B



Equip No F-1254
 Service Centrifuge
 Capacity 48" dia x 38" Ht
 Material Hastelloy C
 HP <>
 RPM 0-1000
 Rated Temperature <>°F
 Rated Pressure <>psig

Equip. No F-(NEW)
 Service Centrifuge
 Capacity 48" dia x 38" Ht
 Material 316 SS
 HP <>
 RPM 0-1000
 Rated Temperature: <>°F
 Rated Pressure <>psig

Equip. No D-7100
 Service Rotary Vacuum Dryer
 Capacity 240 cu ft working
 Material 304 SS Clad
 HP 10
 RPM 38
 Rated Temperature <>°F
 Rated Pressure FV

Equip No. R-1111
 Service: Precipitation Reactor
 Capacity: 3,000 gal
 Material: Glass-Lined Steel
 HP: N/A
 RPM: N/A
 Rated Temperature <>°F
 Rated Pressure <>psig

Equip. No R-1110
 Service: Centrifuge Feed Tank
 Capacity 4,000 gal
 Material: Glass-Lined Steel
 HP: N/A
 RPM: N/A
 Rated Temperature: <>°F
 Rated Pressure: <>psig

Equip No P-1111 (NEW)
 Service: Precipitation Transfer
 Capacity: 150 gpm @ 70' TDH
 Material 316 SS
 HP: TBD
 RPM: TBD
 Rated Temperature 400°F
 Rated Pressure TBD

Equip No. P-1110
 Service: Centrif Feed Pump
 Capacity 150 gpm @ 73' TDH
 Material 316 SS
 HP: TBD
 RPM: TBD
 Rated Temperature: 400°F
 Rated Pressure: TBD



Title: Cyclanilide 90946 Process Flow Diagram
 Page 2 of 4 Pages

Drawn: DCG	Scale: None	Date: 03/15/00	Rev: B
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Aventis: Cyclanilide-Huls Technology Basis-Two (2) Centrifuge Option
Heat & Mass Balance

Summary of Results	
Final Product (lb/day)	2,936 lb
Limiting Cycle Time	27.7 hours
Final Product (lb/day)	2,543 lb/day
Final Product (MT/day)	1.2 MT/day

Assumptions:

1. Process overall 80% O.S.T.
2. 0.5% Material Loss through centrifugation
3. Centrifuge discharge @ 20% LOD
4. Centrifugation Cycle=45 minutes @ 400 lb./plow
5. Dryer discharge at 0.5% LOD
6. All Yield calculations based on DCA
7. ---
8. ---
9. ---
10. ---

R-1107

R-1109

R-1111

Stream No.		1	2	3	4	5	6	7	8	9	10	11
Description		Premix Initial Charge	R-7 Charge + Premix	MeOH Strip	O/H Charged Back	Intermed Xferred to R-9	R-9 Water Charge	R-9 Hydr. Intermediate	MeOH Distillat'n	Intermed. Xferred to R-11	Hydrol. Org. Phase to Rec'y	R-11 Acid Charge
Component	MW											
Raw Materials												
CPDM	158.10		2,292.8									
2,4 DCA	162.00	2,292.8	2,292.8									
NaOCH3	54.00		866.7									
MeOH	32.00		2,022.3									
H2O	18.00						11,464.0	11,464.0		11,464.0		
NaOH	40.00							232.3				
Formic Acid	46.03											1,146.4
Xylene	106.17	3,439.2	11,750.6	160.5	160.5	11,750.6		11,750.6			11,750.6	
(By) Products												
Na-CPMPA	310.10					4,339.8						
MeOH	32.00			3,049.4	3,049.4	3,049.4		447.8	447.8			
Na-RPA 90946	296.10							4,040.2		4,040.2		
RPA 90946	274.10											
NaCHO2	68.01											
Others	---											
Stream Weight, lb/batch		5,792.0	19,225.2	3,209.9	3,209.9	19,139.8	11,464.0	27,935.1	447.8	15,504.3	11,750.6	1,146.4
Stream Volume, gal (ft3)		793.8	2,442.3	484.6	385.3	2,703.2	1,376.2	3,457.3	67.9	1,918.8	1,623.3	116.6
Temperature, °F		160.0	136.0	148.3	145.0	145.0	140.0	77.0	212.0	68.0	77.0	77.0
Pressure, psia (torr)		14.7	14.7	{270}	14.7	14.7	14.7	14.7	14.7	14.7	14.7	14.7
Density, g/cc (lb/ft3)		0.87	0.95	0.80	1.00	0.85	1.00	0.97	0.79	0.97	0.87	1.18
Viscosity, cP (cSt)												
Molar Yield (Overall)						96.5%		97.5%				

Reactor Nom. Volume (gal): 3,000.0 3,000.0 4,000.0 3,000.0
 Reactor Filled Percentage: 81% 90% 86% 64%

Aventis: Cyclanilide-Huls Techn
Heat & Mass Balance

Assumptions:

1. Process overall 80% O.S.T.
2. 0.5% Material Loss through centrifugation
3. Centrifuge discharge @ 20% LOD
4. Centrifugation Cycle=45 minutes @ 400 lb./pl
5. Dryer discharge at 0.5% LOD

Stream No.		R-1110	CF:F1254	D-7100	Packout	Solvent Recovery		Water Recovery		Waste Streams	
		12	13	14	15	16	17	18	19	20	21
Description		Precipit'd Prod't to Centrif.	Wash + ML Disch.	Wet Prod't to Dryer	Dried Final Product	Xylene to Recycle	Recycled Toluene	Water to Recycle	Recycled Water	Organic Waste	Aqueous Waste
Component	MW										
Raw Materials											
CPDM	158.10										
2,4 DCA	162.00										
NaOCH3	54.00										
MeOH	32.00										
H2O	18.00	11,464.0	11,935.3	1,099.6	18.2	1.8		13,034.9	12,736.0	1.8	298.9
NaOH	40.00										
Formic Acid	46.03										
Xylene	106.17					11,750.6	8,345.7			3,405.0	
(By) Products											
Na-CPMPA	310.10										
MeOH	32.00									6,546.7	
Na-RPA 90946	296.10										
RPA 90946	274.10	3,665.2		3,646.9	2,917.5						
NaCHO2	68.01	1,693.8	1,693.8					1,693.8			1,693.8
Others	—					364.7				364.7	
Stream Weight, lb/batch		16,823.0	13,629.1	4,746.5	2,935.8	12,117.1	8,345.7	14,728.6	12,736.0	10,318.1	1,992.7
Stream Volume, gal (ft3)		2,082.0	1,558.2			1,678.4	1,156.0	1,637.2	1,528.9	1,515.6	208.0
Temperature, °F		68.0	68.0	212.0	212.0	68.0	75.0	68.0	68.0	68.0	68.0
Pressure, psia (torr)		14.7	14.7	14.7	14.7	14.7	14.7	14.7	14.7	14.7	14.7
Density, g/cc (lb/ft3)		0.97	1.05			0.87	0.87	1.08	1.00	0.82	1.15
Viscosity, cP (CSt)											
Molar Yield (Overall)		98.0%			{92.2%}						

Reactor Nom. Volume (gal): 4,000.0
 Reactor Filled Percentage: 52%

Aventis: Cyclanilide—Huls Technology Basis—Two (2) Centrifuge Option
Cycle Time Analysis

		<u>Step Cycle</u> <u>Time</u>	<u>Vessel Cycle</u> <u>Time</u>	Rate Limiting Time 27.7 hours
Premix Prep (R-1107)	Charge Toluene	<u>0.5</u>	Σ = 2.8	Total Batch Time Req'd 64.1 hours
	Charge 2,4 DCA	<u>1.3</u> [Drum]		
	Mix/Hold	1.0		
Coupling Reaction (R-1107)	Charge Premix	<u>0.4</u>	Σ = 9.0	Notes: nn.n indicates calculated value, otherwise value is estimated
	Draw Vacuum	0.3		
	Heat to 56-59°C	0.8		
	Charge Na Methoxide	3.0		
	Distill MeOH/Toluene Azeotrope	2.0		
	Cool to 60-65°C	1.0		
	Charge Water	0.0		
	Transfer to Hydrolysis Rxtr	1.5		
Hydrolysis Reaction (R-1109)	Charge Water	<u>1.5</u>	Σ = 10.0	
	Heat/Reflux	3.0		
	Distill MeOH	2.5		
	Cool Rxtr <50°C	1.0		
	Sample/NaOH Adjust	0.0		
	Phase Separate / Transfer	2.0		
Precipitation (R-1111)	Cool <25°C	1.0	Σ = 6.0	
	Charge Formic Acid	3.0		
	Mix	0.5		
	Sample/Results	0.5		
	Transfer	0.5		
Centrifugation (R-1110, F-1254)	Centrifuge Batch	<u>27.7</u>	Σ = 27.7 (100 kg plow per 8 hrs)	
Drying	Charge 1.5 batches	1.0	Σ = 8.5	
	Dry Batch	6.0		
	Packout	1.5		

COOST ESTIMATE SUMMARY

PROJECT: CYCLANILIDE V3 (CENTRIFUGE)

DATE: 16-Mar-00

PROJECT ENGINEER: M. REINSAGER

REV.

LABOR RATE: \$35.00

	QTY	UNIT	UNIT MH	TOTAL MH	LABOR	MATERIAL	TOTAL
5.0 HEAT EXCHANGERS							
CARBATE (50 FT^2)		EA	60.00	0	\$0.00	\$0.00	\$0.00
CARBATE, TFE IMP. (100 FT^2)		EA	60.00	0	\$0.00	\$0.00	\$0.00
CARBATE (200 FT^2)		EA	50.00	0	\$0.00	\$0.00	\$0.00
CARBATE, TFE IMP. (500 FT^2)		EA	50.00	0	\$0.00	\$0.00	\$0.00
CARBATE (1000 FT^2)		EA	60.00	0	\$0.00	\$0.00	\$0.00
TUBE/SHELL, HAST. (1000 FT^2)		EA	60.00	0	\$0.00	\$0.00	\$0.00
TUBE/SHELL, SS (50 FT^2)		EA	50.00	0	\$0.00	\$0.00	\$0.00
TUBE/SHELL, SS (350 FT^2)	3	EA	60.00	180	\$6,300.00	\$24,000.00	\$30,300.00
TUBE/SHELL, SS (600 FT^2)		EA	50.00	0	\$0.00	\$0.00	\$0.00
COOLING TOWERS		EA	350.00	0	\$0.00	\$0.00	\$0.00
CL2 VAPORIZER		EA	60.00	0	\$0.00	\$0.00	\$0.00
SUBTOTAL				180	\$6,300.00	\$24,000.00	\$30,300.00
6.0 ROTATING EQUIPMENT							
PUMPS (50 GPM)	2	EA	160.00	320	\$11,200.00	\$18,000.00	\$29,200.00
PUMPS (350 GPM)	1	EA	40.00	40	\$1,400.00	\$12,000.00	\$13,400.00
PUMPS (100 GPM), TFE LINED		EA	40.00	0	\$0.00	\$0.00	\$0.00
BLOWER		EA					\$0.00
SCREW CONVEYOR	1	EA	80.00	80	\$2,800.00	\$5,000.00	\$7,800.00
VAC PUMP, AUTO SS		EA	80.00	0	\$0.00	\$0.00	\$0.00
NUTSCHE		EA	120.00	0	\$0.00	\$0.00	\$0.00
CENTRIFUGE (48" SS)		EA	80.00	0	\$0.00	\$0.00	\$0.00
SUBTOTAL				440	\$15,400.00	\$35,000.00	\$50,400.00
7.0 FILTERING EQUIPMENT							
CARTRIDGE FILTER		EA	20.00	0	\$0.00	\$0.00	\$0.00
CARTRIDGE		EA					\$0.00
FLUNDA (105 FT^2)		EA	60.00	0	\$0.00	\$0.00	\$0.00
CENTRIFUGE - BASKET (SS)	1	EA	240.00	240	\$8,400.00	\$70,000.00	\$78,400.00
SUBTOTAL				240	\$8,400.00	\$70,000.00	\$78,400.00
8.0 PIPING							
PIPING (1-2 IN), TFE/CS		LF	1.40	0	\$0.00	\$0.00	\$0.00
PIPING (3-6 IN), TFE/CS		LF	1.70	0	\$0.00	\$0.00	\$0.00
PIPING (8-12 IN), SS		LF	2.70	0	\$0.00	\$0.00	\$0.00
PIPING (.5-.75 IN), SS		LF	0.70	0	\$0.00	\$0.00	\$0.00
PIPING (1-2 IN), SS	1300	LF	1.20	1560	\$54,600.00	\$16,900.00	\$71,500.00
PIPING (3-6 IN), SS	300	LF	2.50	750	\$26,250.00	\$6,600.00	\$32,850.00
PIPING (4-8 IN), CS		LF	1.50	0	\$0.00	\$0.00	\$0.00
PIPING (.5-.75 IN), CS	250	LF	0.70	175	\$6,125.00	\$1,500.00	\$7,625.00
PIPING (1-2 IN), CS	100	LF	1.00	100	\$3,500.00	\$700.00	\$4,200.00
		LF	2.00	0	\$0.00	\$0.00	\$0.00
PIPING (2-4 IN), FIBERCAST		LF	2.00	0	\$0.00	\$0.00	\$0.00
VALVES - TFE LINED (3/4-1 IN)		EA		0	\$0.00	\$0.00	\$0.00
VALVES - TFE LINED (1-2 IN)		EA		0	\$0.00	\$0.00	\$0.00
VALVES - TFE LINED (3-6 IN)		EA		0	\$0.00	\$0.00	\$0.00
VALVES - CS (.75 IN)	20	EA		0	\$0.00	\$2,000.00	\$2,000.00
VALVES - CS (1-2 IN)	10	EA		0	\$0.00	\$1,500.00	\$1,500.00
VALVES - CS (3-6 IN)		EA		0	\$0.00	\$0.00	\$0.00
VALVES - SS (3-6 IN)	4	EA		0	\$0.00	\$2,400.00	\$2,400.00
VALVES - EXOTIC		EA		0	\$0.00	\$0.00	\$0.00

COOST ESTIMATE SUMMARY

PROJECT: CYCLANILIDE V3 (CENTRIFUGE)

DATE: 18-Mar-00

PROJECT ENGINEER: M. REINSAGER

REV.

LABOR RATE: \$35.00

	QTY	UNIT	UNIT MH	TOTAL MH	LABOR	MATERIAL	TOTAL
5.0 HEAT EXCHANGERS							
CARBATE (50 FT^2)		EA	50.00	0	\$0.00	\$0.00	\$0.00
CARBATE, TFE IMP. (100 FT^2)		EA	50.00	0	\$0.00	\$0.00	\$0.00
CARBATE (200 FT^2)		EA	50.00	0	\$0.00	\$0.00	\$0.00
CARBATE, TFE IMP. (500 FT^2)		EA	50.00	0	\$0.00	\$0.00	\$0.00
CARBATE (1000 FT^2)		EA	60.00	0	\$0.00	\$0.00	\$0.00
TUBE/SHELL, HAST, (1000 FT^2)		EA	60.00	0	\$0.00	\$0.00	\$0.00
TUBE/SHELL, SS (50 FT^2)		EA	50.00	0	\$0.00	\$0.00	\$0.00
TUBE/SHELL, SS (350 FT^2)	3	EA	60.00	180	\$6,300.00	\$24,000.00	\$30,300.00
TUBE/SHELL, SS (800 FT^2)		EA	50.00	0	\$0.00	\$0.00	\$0.00
COOLING TOWERS		EA	350.00	0	\$0.00	\$0.00	\$0.00
CL2 VAPORIZER		EA	60.00	0	\$0.00	\$0.00	\$0.00
SUBTOTAL				180	\$6,300.00	\$24,000.00	\$30,300.00
6.0 ROTATING EQUIPMENT							
PUMPS (50 GPM)	2	EA	160.00	320	\$11,200.00	\$18,000.00	\$29,200.00
PUMPS (350 GPM)	1	EA	40.00	40	\$1,400.00	\$12,000.00	\$13,400.00
PUMPS (100 GPM), TFE LINED		EA	40.00	0	\$0.00	\$0.00	\$0.00
BLOWER		EA					\$0.00
SCREW CONVEYOR	1	EA	80.00	80	\$2,800.00	\$5,000.00	\$7,800.00
VAC PUMP, AUTO SS		EA	80.00	0	\$0.00	\$0.00	\$0.00
NUTSCHE		EA	120.00	0	\$0.00	\$0.00	\$0.00
CENTRIFUGE (48" SS)		EA	80.00	0	\$0.00	\$0.00	\$0.00
SUBTOTAL				440	\$15,400.00	\$35,000.00	\$50,400.00
7.0 FILTERING EQUIPMENT							
CARTRIDGE FILTER		EA	20.00	0	\$0.00	\$0.00	\$0.00
CARTRIDGE		EA					\$0.00
FUNDA (105 FT^2)		EA	60.00	0	\$0.00	\$0.00	\$0.00
CENTRIFUGE - BASKET (SS)	1	EA	240.00	240	\$8,400.00	\$70,000.00	\$78,400.00
SUBTOTAL				240	\$8,400.00	\$70,000.00	\$78,400.00
8.0 PIPING							
PIPING (1-2 IN), TFE/CS		LF	1.40	0	\$0.00	\$0.00	\$0.00
PIPING (3-6 IN), TFE/CS		LF	1.70	0	\$0.00	\$0.00	\$0.00
PIPING (8-12 IN), SS		LF	2.70	0	\$0.00	\$0.00	\$0.00
PIPING (.5-.75 IN), SS		LF	0.70	0	\$0.00	\$0.00	\$0.00
PIPING (1-2 IN), SS	1300	LF	1.20	1560	\$54,600.00	\$16,900.00	\$71,500.00
PIPING (3-6 IN), SS	300	LF	2.50	750	\$26,250.00	\$6,600.00	\$32,850.00
PIPING (4-6 IN), CS		LF	1.50	0	\$0.00	\$0.00	\$0.00
PIPING (.5-.75 IN), CS	250	LF	0.70	175	\$6,125.00	\$1,500.00	\$7,625.00
PIPING (1-2 IN), CS	100	LF	1.00	100	\$3,500.00	\$700.00	\$4,200.00
		LF	2.00	0	\$0.00	\$0.00	\$0.00
PIPING (2-4 IN), FIBERCAST		LF	2.00	0	\$0.00	\$0.00	\$0.00
VALVES - TFE LINED (3/4-1 IN)		EA		0	\$0.00	\$0.00	\$0.00
VALVES - TFE LINED (1-2 IN)		EA		0	\$0.00	\$0.00	\$0.00
VALVES - TFE LINED (3-6 IN)		EA		0	\$0.00	\$0.00	\$0.00
VALVES - CS (.75 IN)	20	EA		0	\$0.00	\$2,000.00	\$2,000.00
VALVES - CS (1-2 IN)	10	EA		0	\$0.00	\$1,500.00	\$1,500.00
VALVES - CS (3-6 IN)		EA		0	\$0.00	\$0.00	\$0.00
VALVES - SS (3-6 IN)	4	EA		0	\$0.00	\$2,400.00	\$2,400.00
VALVES - EXOTIC		EA		0	\$0.00	\$0.00	\$0.00

COST ESTIMATE SUMMARY

PAGE 3 of 3

PROJECT: CYCLANILIDE V3 (CENTRIFUGE)

DATE 16-Mar-00

PROJECT ENGINEER M REINSAGER

REV

LABOR RATE \$35 00

	QTY	UNIT	UNIT MH	TOTAL MH	LABOR	MATERIAL	TOTAL
VALVES SS (1-2 IN)	35	EA		0	\$0 00	\$8,750 00	\$8,750 00
VALVES - SS (4-6 IN)		EA		0	\$0 00	\$0 00	\$0 00
FITTINGS, TFE (1-2 IN)		EA		0	\$0 00	\$0 00	\$0 00
FITTINGS, TFE (3-6 IN)		EA		0	\$0 00	\$0 00	\$0 00
INSULATION (2-4 IN)	100	LF	0 40	40	\$1,400 00	\$1,000 00	\$2,400 00
PAINTING		LF	0 20	0	\$0 00	\$0 00	\$0 00
PSV		EA	5 00	0	\$0 00	\$0 00	\$0 00
RUPTURE DISC		EA	5 00	0	\$0 00	\$0 00	\$0 00
STEAM TRACING/INS	150	LF	0 50	75	\$2,625 00	\$1,200 00	\$3,825 00
PIPING MISC (HANGERS, ETC.)	8	LOT	40 00	320	\$11,200 00	\$6,400 00	\$17,600 00
HOT WATER MIXER		LOT	20 00	0	\$0 00	\$0 00	\$0 00
SUBTOTAL				3020	\$106,700 00	\$48,950 00	\$154,650 00
9.0 ELECTRIC/INSTRUMENTATION							
SCALE	1	EA	20 00	20	\$700 00	\$2,500 00	\$3,200 00
MOTOR (20-40 HP)	4	EA	24 00	96	\$3,360 00	\$6,000 00	\$9,360 00
WIRING/CONDUIT/TRAY	800	LF	0 70	560	\$19,600 00	\$9,600 00	\$29,200 00
FLOW INST (MICRO-MOTION)	4	EA	48 00	192	\$6,720 00	\$20,000 00	\$26,720 00
FLOW INSTRUMENTS		EA	10 00	0	\$0 00	\$0 00	\$0 00
PRESSURE INSTRUMENTS/CTRL		EA	50 00	0	\$0 00	\$0 00	\$0 00
LEVEL INSTRUMENTS	4	EA	42 00	168	\$5,880 00	\$6,000 00	\$11,880 00
GUAGES	16	EA	0 80	13	\$448 00	\$1,200 00	\$1,648 00
TEMP INDICATOR	5	EA	2 00	10	\$350 00	\$1,000 00	\$1,350 00
CONTROL VALVES	8	EA	24 00	192	\$6,720 00	\$16,000 00	\$22,720 00
PRESSURE REGULATORS	2	EA	8 00	16	\$560 00	\$1,000 00	\$1,560 00
CONTROL FRS	4	EA	12 00	48	\$1,680 00	\$3,200 00	\$4,880 00
INTERLOCKS (MINIMAL)	8	EA	10 00	80	\$2,800 00	\$2,400 00	\$5,200 00
CENTRIFUGE CONTROL	1	EA	250 00	250	\$8,750 00	\$15,000 00	\$23,750 00
CONTROL ROOM/MCC		EA	650 00	0	\$0 00	\$0 00	\$0 00
ELECTRICAL MISC	4	LOT	160 00	640	\$22,400 00	\$12,000 00	\$34,400 00
SWITCHES	8	EA	10 00	80	\$2,800 00	\$1,600 00	\$4,400 00
SUBTOTAL				2365	\$82,768 00	\$97,600 00	\$180,268 00
10.0 INSPECTION/ENGINEERING							
VESSEL INSPECTIONS		EA			\$0 00		\$0 00
ENGINEERING/DCS CONFIG	20	LOT	40 00	800	\$28,000 00		\$28,000 00
DRAFTING/DESIGN	20	LOT	40 00	800	\$28,000 00		\$28,000 00
SUBTOTAL				1600	\$56,000 00	\$0 00	\$56,000 00
11.0 RENTALS							
CRANE	3	LOT				\$4,500 00	\$4,500 00
EQUIPMENT		LOT				\$0 00	\$0 00
FREIGHT (ALL ABOVE)	6	LOT				\$9,000 00	\$9,000 00
12.0 MISCELLANEOUS							
LAB EQUIPMENT		LOT				\$0 00	\$0 00
SUBTOTAL						\$9,000 00	\$9,000 00
SUBTOTAL				11782.3	\$412,380.50	\$423,985.00	\$836,365.50
OVERTIME (50%)							
CONTINGENCY (40%)					\$164,952.20	\$169,594.00	\$334,546.20
TOTAL					\$577,332.70	\$593,579.00	\$1,170,911.70

Aventis: Cyclanilide--Huls Technology Basis--One (1) Centrifuge Option
Heat & Mass Balance

Assumptions:

- | | |
|---|--|
| 1. Process overall 80% O.S.T. | 6. All Yield calculations based on DCA |
| 2. 0.5% Material Loss through centrifugation | 7. --- |
| 3. Centrifuge discharge @ 20% LOD | 8. --- |
| 4. Centrifugation Cycle=45 minutes @ 400 lb./plow | 9. --- |
| 5. Dryer discharge at 0.5% LOD | 10. --- |

Summary of Results	
Final Product lb/bx:	2,936 lb
Limiting Cycle Time:	55.4 hours
Final Product lb/day:	1,271 lb/day
Final Product MT/day:	0.6 MT/day

Stream No.	Description	R-1107					R-1111					
		1	2	3	4	5	6	7	8	9	10	11
		Premix Initial Charge	R-7 Charge + Premix	MeOH Strip	O/H Charged Back	Intermed Xferred to R-9	R-9 Water Charge	R-9 Hydr. Intermediate	MeOH Distillat'n	Intermed. Xferred to R-11	Hydrol. Org. Phase to Rec'y	R-11 Acid Charge
Component	MW											
Raw Materials												
CPDM	158.10		2,292.8									
2,4 DCA	162.00	2,292.8	2,292.8									
NaOCH3	54.00		866.7									
MeOH	32.00		2,022.3									
H2O	18.00						11,464.0	11,464.0		11,464.0		
NaOH	40.00							232.3				
Formic Acid	46.03											1,146.4
Xylene	106.17	3,439.2	11,750.6	160.5	160.5	11,750.6		11,750.6			11,750.6	
(By) Products												
Na-CPMPA	310.10					4,339.8						
MeOH	32.00			3,049.4	3,049.4	3,049.4		447.8	447.8			
Na-RPA 90946	296.10							4,040.2		4,040.2		
RPA 90946	274.10											
NaCHO2	68.01											
Others	---											
Stream Weight, lb/batch		5,732.0	19,225.2	3,209.9	3,209.9	19,139.8	11,464.0	27,935.1	447.8	15,504.3	11,750.6	1,146.4
Stream Volume, gal (ft3)		793.8	2,442.3	484.6	385.3	2,703.2	1,376.2	3,457.3	67.9	1,918.8	1,623.3	116.6
Temperature, °F		100.0	136.0	146.3	145.0	145.0	140.0	77.0	212.0	68.0	77.0	77.0
Pressure, psia (torr)		-14.7	14.7	(270)	14.7	14.7	14.7	14.7	14.7	14.7	14.7	14.7
Density, g/cc (lb/ft3)		-0.87	0.95	0.80	1.00	0.85	1.00	0.97	0.79	0.97	0.87	1.18
Viscosity, cP (CSt)												
Molar Yield (Overall)						96.5%		97.5%				
Reactor Nom. Volume (gal):		3,000.0			3,000.0			4,000.0		3,000.0		
Reactor Filled Percentage:		81%			90%			86%		64%		

Aventis: Cyclanilide-Huls Techn
Heat & Mass Balance

Assumptions:

1. Process overall 80% O.S.T.
2. 0.5% Material Loss through centrifugation
3. Centrifuge discharge @ 20% LOD
4. Centrifugation Cycle=45 minutes @ 400 lb./pl
5. Dryer discharge at 0.5% LOD

		R-1110	CF:F1254	D-7100	Packout	Solvent Recovery		Water Recovery		Waste Streams	
Stream No.		12	13	14	15	16	17	18	19	20	21
Description		Precipit'd Prod't to Centrif.	Wash + ML Disch.	Wet Prod't to Dryer	Dried Final Product	Xylene to Recycle	Recycled Toluene	Water to Recycle	Recycled Water	Organic Waste	Aqueous Waste
Component	MW										
Raw Materials											
CPDM	158.10										
2,4 DCA	162.00										
NaOCH3	54.00										
MeOH	32.00										
H2O	18.00	11,464.0	11,935.3	1,099.6	18.2	1.8		13,034.9	12,736.0	1.8	298.9
NaOH	40.00										
Formic Acid	46.03										
Xylene	106.17					11,750.6	8,345.7			3,405.0	
(By) Products											
Na-CPMPA	310.10										
MeOH	32.00									6,546.7	
Na-RPA 90946	296.10										
RPA 90946	274.10	3,665.2		3,646.9	2,917.5						
NaCHO2	68.01	1,693.8	1,693.8					1,693.8			1,693.8
Others	---					364.7				364.7	
Stream Weight, lb/batch		16,823.0	13,629.1	4,746.5	2,935.8	12,117.1	8,345.7	14,728.6	12,736.0	10,318.1	1,992.7
Stream Volume, gal (ft3)		2,082.0	1,558.2			1,678.4	1,156.0	1,637.2	1,528.9	1,515.6	208.0
Temperature, °F		68.0	68.0	212.0	212.0	68.0	75.0	68.0	68.0	68.0	68.0
Pressure, psia (torr)		14.7	14.7	14.7	14.7	14.7	14.7	14.7	14.7	14.7	14.7
Density, g/cc (lb/ft3)		0.97	1.05			0.87	0.87	1.08	1.00	0.82	1.15
Viscosity, cP (cSt)											
Molar Yield (Overall)		98.0%			{92.2%}						

Reactor Nom. Volume (gal): 4,000.0
 Reactor Filled Percentage: 52%

Aventis: Cyclanilide--Huls Technology Basis--One (1) Centrifuge Option
Cycle Time Analysis

		Step Cycle Time	Vessel Cycle Time	Rate Limiting Time 55.4 hours
Premix Prep (R-1107)	Charge Toluene	0.5	Σ = 2.8	Total Batch Time Req'd 91.8 hours
	Charge 2,4 DCA	1.3 [Drum]		
	Mix/Hold	1.0		
Coupling Reaction (R-1107)	Charge Premix	0.4	Σ = 9.0	Notes: nn,n indicates calculated value, otherwise value is estimated
	Draw Vacuum	0.3		
	Heat to 56-59°C	0.8		
	Charge Na Methoxide	3.0		
	Distill MeOH/Toluene Azeotrope	2.0		
	Cool to 60-65°C	1.0		
	Charge Water	0.0		
Transfer to Hydrolysis Rxtr	1.5			
Hydrolysis Reaction (R-1109)	Charge Water	1.5	Σ = 10.0	
	Heat/Reflux	3.0		
	Distill MeOH	2.5		
	Cool Rxtr <50°C	1.0		
	Sample/NaOH Adjust Phase Separate / Transfer	0.0 2.0		
Precipitation (R-1111)	Cool <25°C	1.0	Σ = 6.0	
	Charge Formic Acid	3.0		
	Mix	0.5		
	Sample/Results	0.5		
	Transfer	0.5		
Centrifugation (R-1110, F-1254)	Centrifuge Batch	55.4	Σ = 55.4 (100 kg plow per 8 hrs)	
Drying	Charge 1.5 batches	1.0	Σ = 8.5	
	Dry Batch	6.0		
	Packout	1.5		

Aventis: Cyclanilide—Huls Technolo
Cycle Time Analysis

Premix Prep (R-1107) **Charge Tol**
Charge 2,4
Mix/Hold

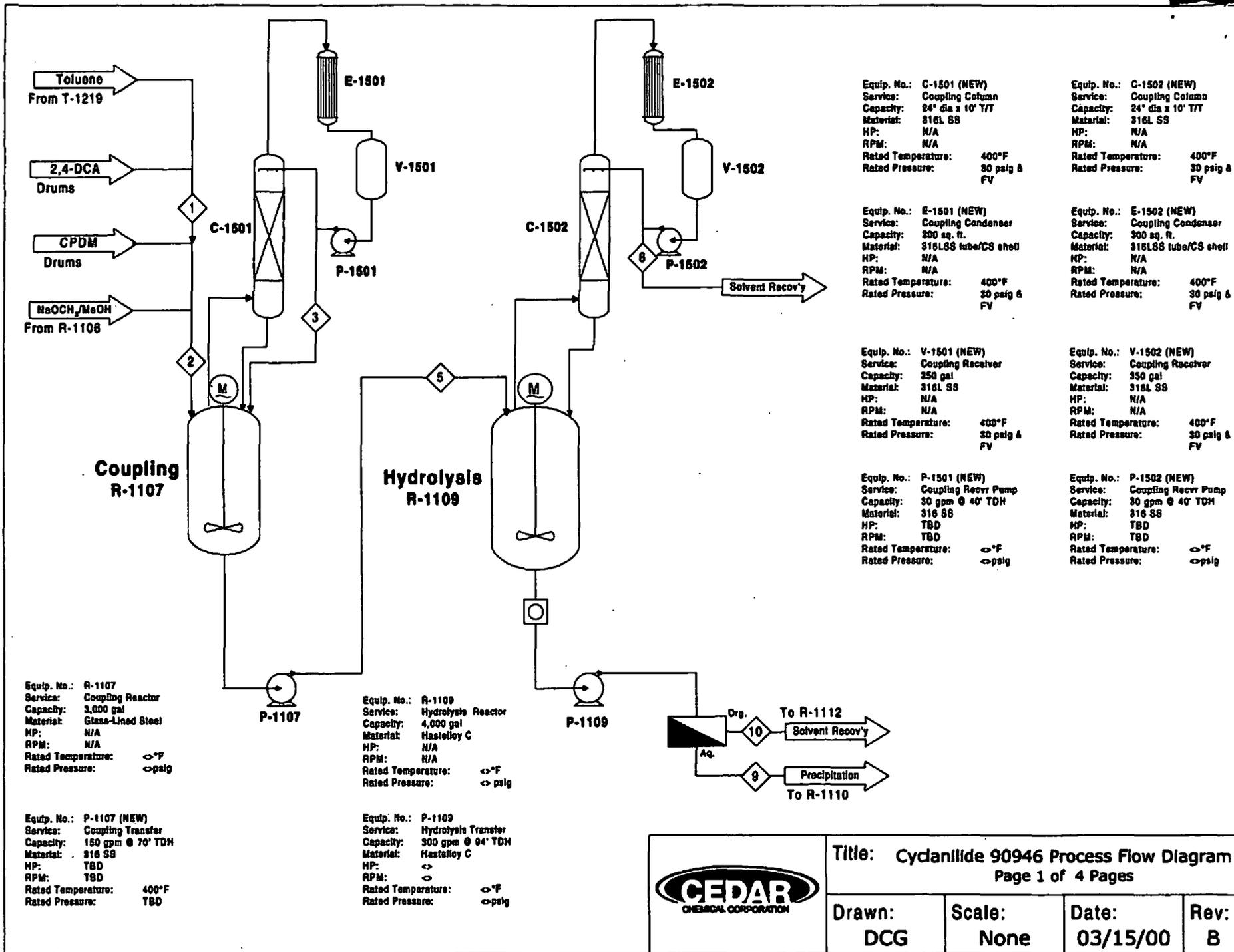
Coupling Reaction
(R-1107) **Charge Pre**
Draw Vacu
Heat to 58-
Charge Na
Distill MeOl
Cool to 60-
Charge Wa
Transfer to

Hydrolysis Reaction
(R-1109) **Charge Wa**
Heat/Reflux
Distill MeOl
Cool Rxtr <
Sample/Na
Phase Sep:

Precipitation (R-1111) **Cool <25°C**
Charge For
Mix
Sample/Ret
Transfer

Centrifugation (R-1110,
F-1254) **Centrifuge I**

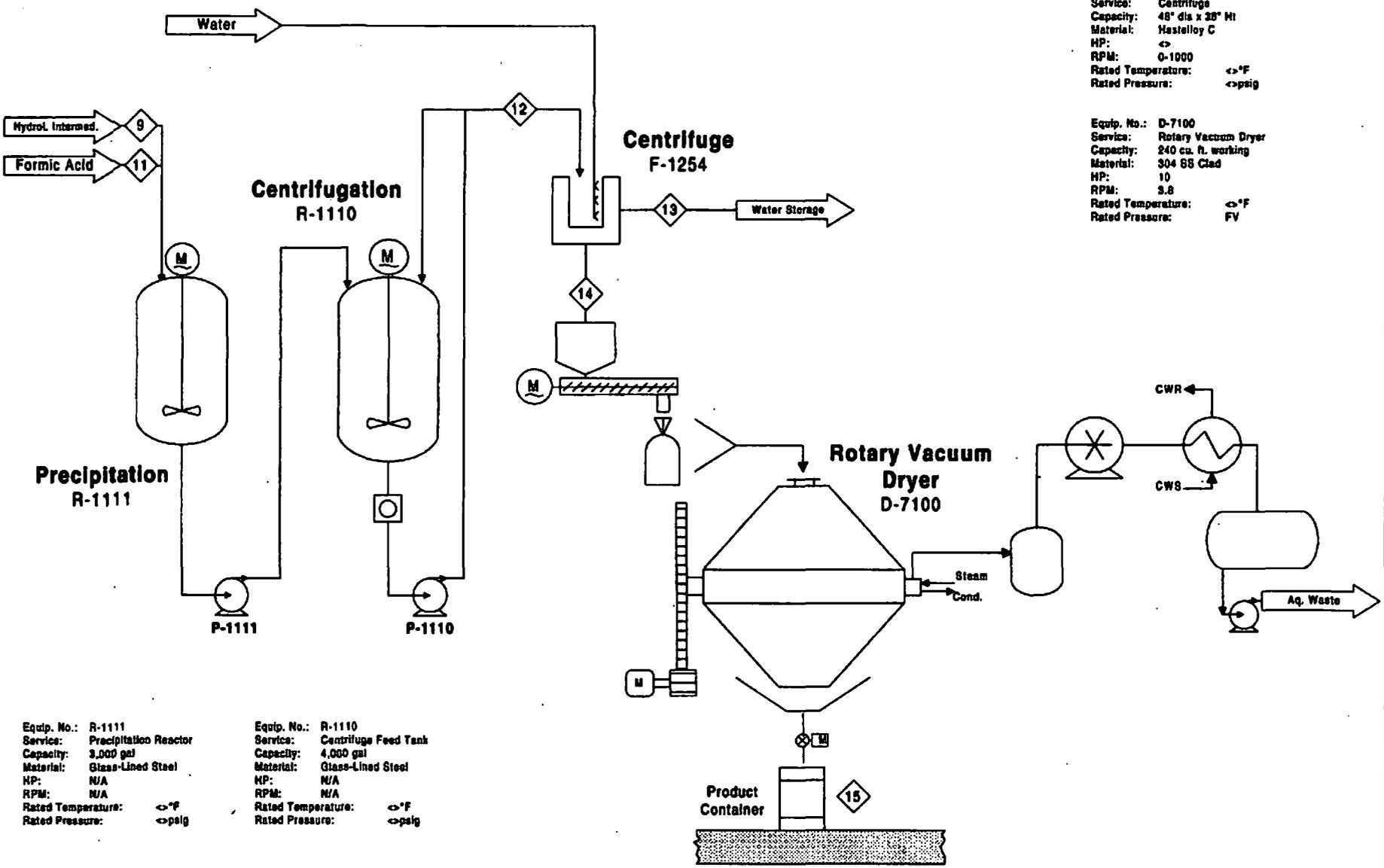
Drying **Charge 1.5**
Dry Batch
Packout



	Title: Cycloamide 90946 Process Flow Diagram Page 1 of 4 Pages			
	Drawn: DCG	Scale: None	Date: 03/15/00	Rev: B

Equip. No.: F-1254
 Service: Centrifuge
 Capacity: 48" dia x 38" Ht
 Material: Hastelloy C
 HP: <>
 RPM: 0-1000
 Rated Temperature: <>°F
 Rated Pressure: <>psig

Equip. No.: D-7100
 Service: Rotary Vacuum Dryer
 Capacity: 240 cu. ft. working
 Material: 304 SS Clad
 HP: 10
 RPM: 3.8
 Rated Temperature: <>°F
 Rated Pressure: FV



Equip. No.: R-1111
 Service: Precipitation Reactor
 Capacity: 3,000 gal
 Material: Glass-Lined Steel
 HP: N/A
 RPM: N/A
 Rated Temperature: <>°F
 Rated Pressure: <>psig

Equip. No.: R-1110
 Service: Centrifuge Feed Tank
 Capacity: 4,000 gal
 Material: Glass-Lined Steel
 HP: N/A
 RPM: N/A
 Rated Temperature: <>°F
 Rated Pressure: <>psig

Equip. No.: P-1111 (NEW)
 Service: Precipitation Transfer
 Capacity: 150 gpm @ 70' TDH
 Material: 316 SS
 HP: TBD
 RPM: TBD
 Rated Temperature: 400°F
 Rated Pressure: TBD

Equip. No.: P-1110
 Service: Centrif. Feed Pump
 Capacity: 150 gpm @ 73' TDH
 Material: 316 SS
 HP: TBD
 RPM: TBD
 Rated Temperature: 400°F
 Rated Pressure: TBD



Title: Cyclanilide 90946 Process Flow Diagram
 Page 2 of 4 Pages

Drawn:
DCG

Scale:
None

Date:
03/15/00

Rev:
B



To: Joe Mancini Date: 3/17/00
Location: Memphis Office Copy to: Chris McGee
From: D.C. Guffey Kevin Payne
Location: Helena Plant Geoff Pratt
Extension: 283 Jim Rone
Subject: Cyclanilide Process
Reference:

Attached are the flowsheets (w/o recovery and emissions control drawings), material balance, and cost estimate for two Cyclanilide cases: 1) minimum capital and 2) maximum productivity. Please note the productivity numbers are greatly impacted by centrifuge cycle-time data obtained on the Degussa Hüls plant visit.

As you may recall, the Degussa centrifuge cycle is approximately eight (8) hours for a 300 kg batch with each centrifuge payload resulting in approximately 100 kg of wet (~17%) material. Further, the Degussa centrifuge is the same size as the Unit 1 centrifuge (and Unit 5) and operates at speeds typical to the Cedar centrifuge. This means the maximum productivity of the plant is 82.7 lb/hr or 1,984 lb/day (0.9 MT/d) at 100% OST. Taking into account yield and OST, the maximum productivity of the plant is then 1,272 lb/day (0.6 MT/d) regardless of how much crude material is produced in the reactors.

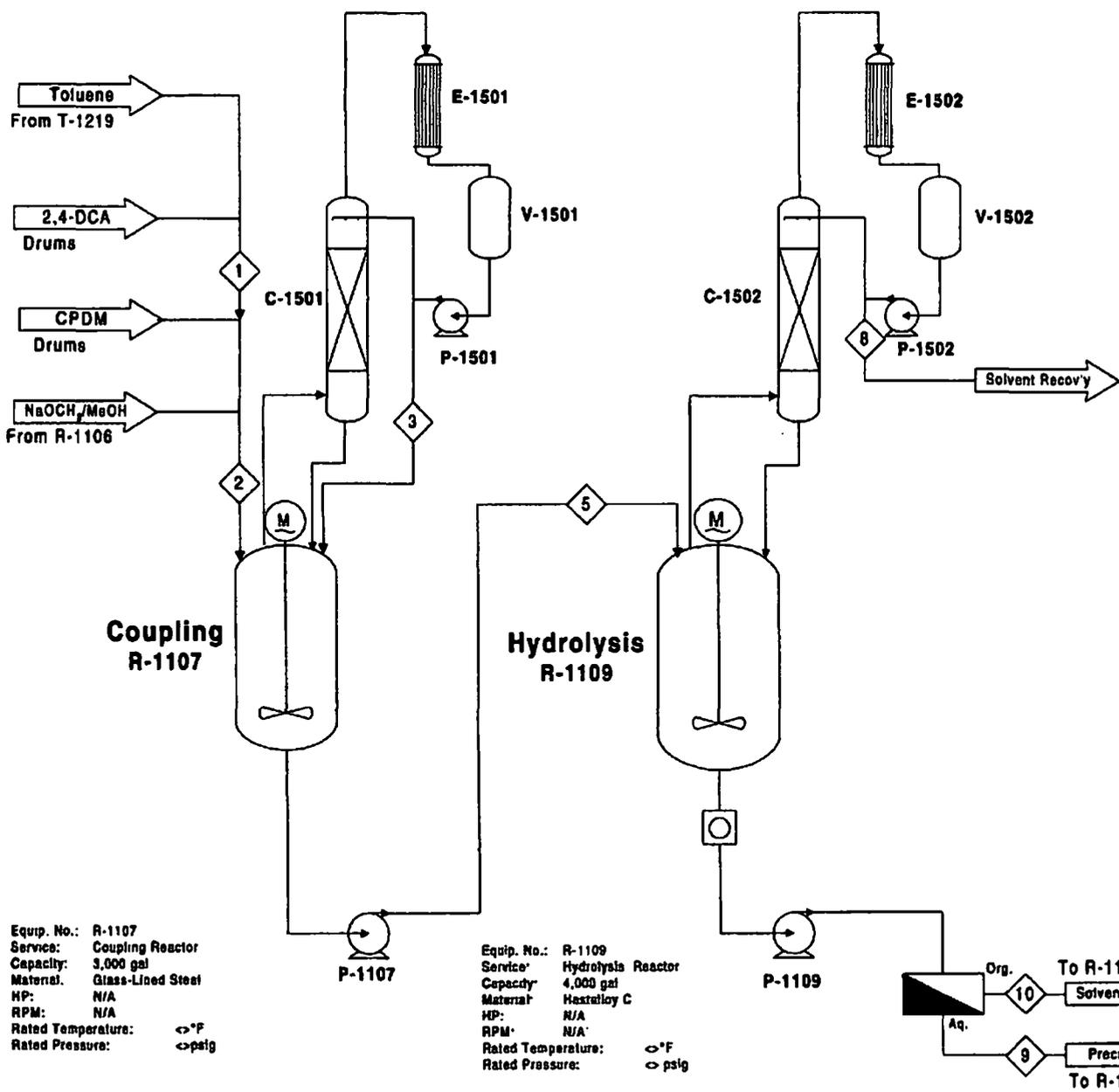
The minimum capital case assumes only one centrifuge is in operation and the cycle time is at least as good as the Degussa process. The capital required for this case is \$809k with a productivity of 0.6 MT/d.

The maximum productivity case installs a second centrifuge—both which operate with cycle times at least as good as the Degussa process. The capital required for this case is \$1.17M with a productivity of 1.2 MT/d.

Installation of yet a third centrifuge is possible but deemed too expensive for the product to bear for the increased productivity.

Please note that the cost estimates are ±40% basis.

***Minimum
Capital
Option***



Equip. No.: C-1501 (NEW)
 Service: Coupling Column
 Capacity: 24" dia x 10' T/T
 Material: 316L SS
 HP: N/A
 RPM: N/A
 Rated Temperature: 400°F
 Rated Pressure: 30 psig & FV

Equip. No.: C-1502 (NEW)
 Service: Coupling Column
 Capacity: 24" dia x 10' T/T
 Material: 316L SS
 HP: N/A
 RPM: N/A
 Rated Temperature: 400°F
 Rated Pressure: 30 psig & FV

Equip. No.: E-1501 (NEW)
 Service: Coupling Condenser
 Capacity: 300 sq. ft
 Material: 316LSS tube/CS shell
 HP: N/A
 RPM: N/A
 Rated Temperature: 400°F
 Rated Pressure: 30 psig & FV

Equip. No.: E-1502 (NEW)
 Service: Coupling Condenser
 Capacity: 300 sq. ft.
 Material: 316LSS tube/CS shell
 HP: N/A
 RPM: N/A
 Rated Temperature: 400°F
 Rated Pressure: 30 psig & FV

Equip. No.: V-1501 (NEW)
 Service: Coupling Receiver
 Capacity: 350 gal
 Material: 316L SS
 HP: N/A
 RPM: N/A
 Rated Temperature: 400°F
 Rated Pressure: 30 psig & FV

Equip. No.: V-1502 (NEW)
 Service: Coupling Receiver
 Capacity: 350 gal
 Material: 316L SS
 HP: N/A
 RPM: N/A
 Rated Temperature: 400°F
 Rated Pressure: 30 psig & FV

Equip. No.: P-1501 (NEW)
 Service: Coupling Recv'r Pump
 Capacity: 30 gpm @ 40' TDH
 Material: 316 SS
 HP: TBD
 RPM: TBD
 Rated Temperature: <>°F
 Rated Pressure: <>psig

Equip. No.: P-1502 (NEW)
 Service: Coupling Recv'r Pump
 Capacity: 30 gpm @ 40' TDH
 Material: 316 SS
 HP: TBD
 RPM: TBD
 Rated Temperature: <>°F
 Rated Pressure: <>psig

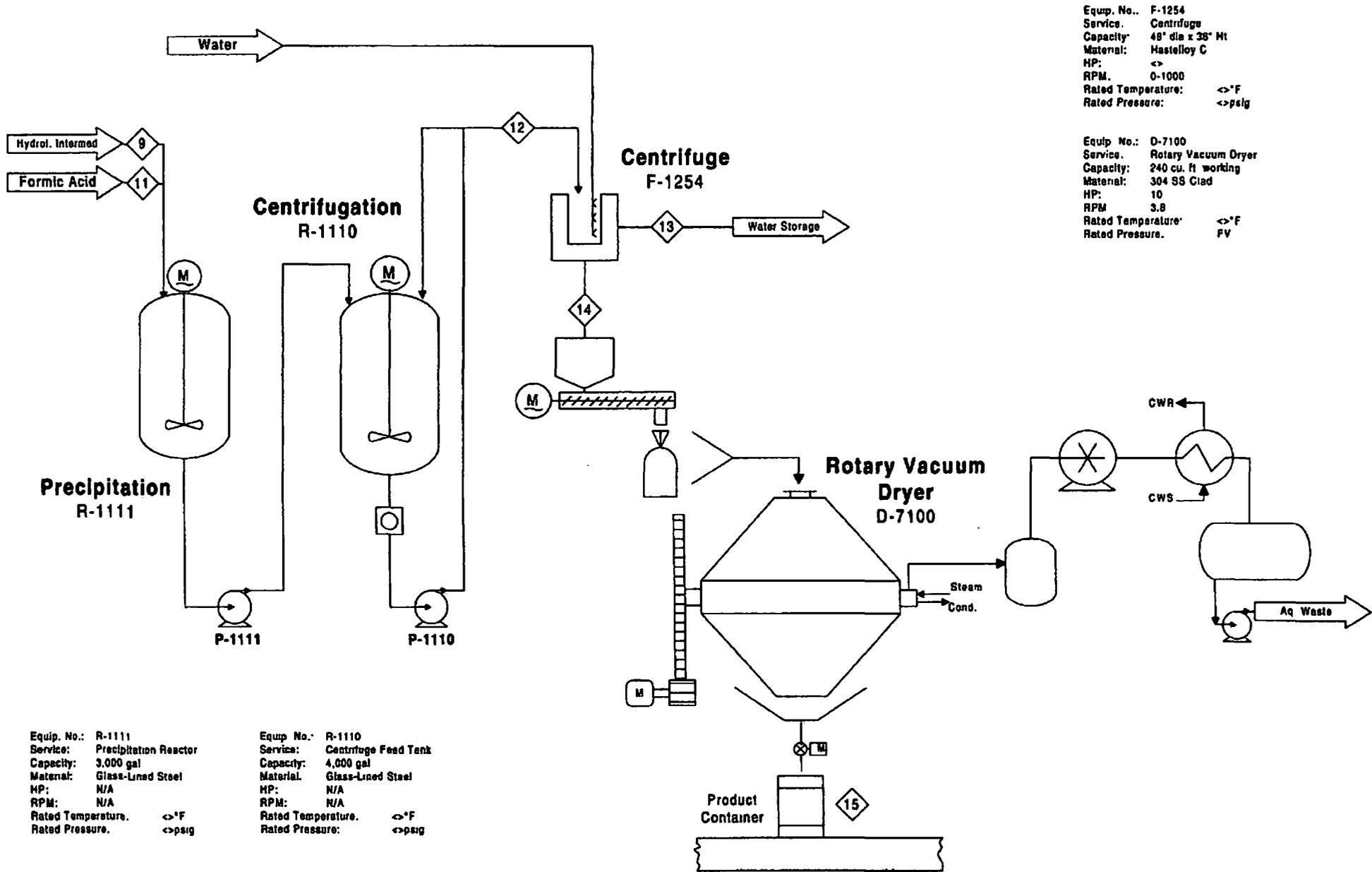
Equip. No.: R-1107
 Service: Coupling Reactor
 Capacity: 3,000 gal
 Material: Glass-Lined Steel
 HP: N/A
 RPM: N/A
 Rated Temperature: <>°F
 Rated Pressure: <>psig

Equip. No.: R-1109
 Service: Hydrolysis Reactor
 Capacity: 4,000 gal
 Material: Hastelloy C
 HP: N/A
 RPM: N/A
 Rated Temperature: <>°F
 Rated Pressure: <>psig

Equip. No.: P-1107 (NEW)
 Service: Coupling Transfer
 Capacity: 150 gpm @ 70' TDH
 Material: 316 SS
 HP: TBD
 RPM: TBD
 Rated Temperature: 400°F
 Rated Pressure: TBD

Equip. No.: P-1109
 Service: Hydrolysis Transfer
 Capacity: 300 gpm @ 94' TDH
 Material: Hastelloy C
 HP: <>
 RPM: <>
 Rated Temperature: <>°F
 Rated Pressure: <>psig

	Title: Cyclanilide 90946 Process Flow Diagram Page 1 of 4 Pages			
	Drawn: DCG	Scale: None	Date: 03/15/00	Rev: B



Equip. No.: F-1254
 Service: Centrifuge
 Capacity: 48" dia x 36" Ht
 Material: Hastelloy C
 HP: <>
 RPM: 0-1000
 Rated Temperature: <>°F
 Rated Pressure: <>psig

Equip. No.: D-7100
 Service: Rotary Vacuum Dryer
 Capacity: 240 cu. ft working
 Material: 304 SS Clad
 HP: 10
 RPM: 3.8
 Rated Temperature: <>°F
 Rated Pressure: FV

Equip. No.: R-1111
 Service: Precipitation Reactor
 Capacity: 3,000 gal
 Material: Glass-Lined Steel
 HP: N/A
 RPM: N/A
 Rated Temperature: <>°F
 Rated Pressure: <>psig

Equip. No.: R-1110
 Service: Centrifuge Feed Tank
 Capacity: 4,000 gal
 Material: Glass-Lined Steel
 HP: N/A
 RPM: N/A
 Rated Temperature: <>°F
 Rated Pressure: <>psig

Equip. No.: P-1111 (NEW)
 Service: Precipitation Transfer
 Capacity: 150 gpm @ 70' TDH
 Material: 316 SS
 HP: TBD
 RPM: TBD
 Rated Temperature: 400°F
 Rated Pressure: TBD

Equip. No.: P-1110
 Service: Centrif. Feed Pump
 Capacity: 150 gpm @ 73' TDH
 Material: 316 SS
 HP: TBD
 RPM: TBD
 Rated Temperature: 400°F
 Rated Pressure: TBD



Title: Cyclanilide 90946 Process Flow Diagram
 Page 2 of 4 Pages

Drawn: DCG	Scale: None	Date: 03/15/00	Rev: B
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Aventis: Cyclanilide-Huls Technology Basis--One (1) Centrifuge Option
Heat & Mass Balance

Summary of Results	
Final Product lb/bx:	2,936 lb
Limiting Cycle Time:	55.4 hours
Final Product lb/day:	1,271 lb/day
Final Product MT/day:	0.6 MT/day

Assumptions:

1. Process overall 80% O.S.T.
2. 0.5% Material Loss through centrifugation
3. Centrifuge discharge @ 20% LOD
4. Centrifugation Cycle=45 minutes @ 400 lb./plow
5. Dryer discharge at 0.5% LOD
6. All Yield calculations based on DCA
7. --
8. --
9. --
10. --

Stream No.	Description	R-1107					R-1109			R-1111		
		1	2	3	4	5	6	7	8	9	10	11
		Premix Initial Charge	R-7 Charge + Premix	MeOH Strip	O/H Charged Back	Intermed Xferred to R-9	R-9 Water Charge	R-9 Hydr. Intermediate	MeOH Distillat'n	Intermed. Xferred to R-11	Hydrol. Org. Phase to Rec'y	R-11 Acid Charge
Component	MW											
Raw Materials												
CPDM	158.10		2,292.8									
2,4 DCA	162.00	2,292.8	2,292.8									
NaOCH3	54.00		866.7									
MeOH	32.00		2,022.3									
H2O	18.00						11,464.0	11,464.0		11,464.0		
NaOH	40.00							232.3				
Formic Acid	46.03											1,146.4
Xylene	106.17	3,439.2	11,750.6	160.5	160.5	11,750.6		11,750.6			11,750.6	
(By) Products												
Na-CPMPA	310.10					4,339.8						
MeOH	32.00			3,049.4	3,049.4	3,049.4		447.8	447.8			
Na-RPA 90946	296.10							4,040.2		4,040.2		
RPA 90946	274.10											
NaCHO2	68.01											
Others	--											
Stream Weight, lb/batch		5,732.0	19,225.2	3,209.9	3,209.9	19,139.8	11,464.0	27,935.1	447.8	15,504.3	11,750.8	1,146.4
Stream Volume, gal (ft3)		763.8	2,442.3	484.6	385.3	2,703.2	1,376.2	3,457.3	67.9	1,918.8	1,623.3	116.6
Temperature, °F		160.0	136.0	146.3	145.0	145.0	140.0	77.0	212.0	68.0	77.0	77.0
Pressure, psia (torr)		14.7	14.7	(270)	14.7	14.7	14.7	14.7	14.7	14.7	14.7	14.7
Density, g/cc (lb/ft3)		0.87	0.95	0.80	1.00	0.85	1.00	0.97	0.79	0.97	0.87	1.18
Viscosity, cP (cSt)												
Molar Yield (Overall)						96.5%		97.5%				
Reactor Nom. Volume (gal):			3,000.0			3,000.0		4,000.0		3,000.0		
Reactor Filled Percentage:			81%			90%		86%		64%		

Aventis: Cyclanilide-Huls Techn
Heat & Mass Balance

Assumptions:

1. Process overall 80% O.S.T.
2. 0.5% Material Loss through centrifugation
3. Centrifuge discharge @ 20% LOD
4. Centrifugation Cycle=45 minutes @ 400 lb./pl
5. Dryer discharge at 0.5% LOD

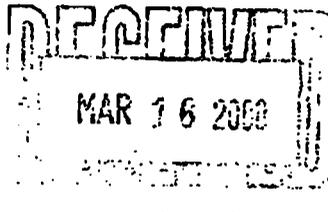
		R-1110	CF:F1254	D-7100	Packout	Solvent Recovery		Water Recovery		Waste Streams	
Stream No.		12	13	14	15	16	17	18	19	20	21
Description		Precipit'd Prod't to Centrif.	Wash + ML Disch.	Wet Prod't to Dryer	Dried Final Product	Xylene to Recycle	Recycled Toluene	Water to Recycle	Recycled Water	Organic Waste	Aqueous Waste
Component	MW										
Raw Materials											
CPDM	158.10										
2,4 DCA	162.00										
NaOCH3	54.00										
MeOH	32.00										
H2O	18.00	11,464.0	11,935.3	1,099.6	18.2	1.8		13,034.9	12,736.0	1.8	298.9
NaOH	40.00										
Formic Acid	46.03										
Xylene	106.17					11,750.6	8,345.7			3,405.0	
(By) Products											
Na-CPMPA	310.10										
MeOH	32.00									6,546.7	
Na-RPA 90946	296.10										
RPA 90946	274.10	3,665.2		3,646.9	2,917.5						
NaCHO2	68.01	1,693.8	1,693.8					1,693.8			1,693.8
Others	---					364.7				364.7	
Stream Weight, lb/batch		16,823.0	13,629.1	4,746.5	2,935.8	12,117.1	8,345.7	14,728.6	12,736.0	10,318.1	1,992.7
Stream Volume, gal (ft3)		2,082.0	1,558.2			1,678.4	1,156.0	1,637.2	1,528.9	1,515.6	208.0
Temperature, °F		68.0	68.0	212.0	212.0	68.0	75.0	68.0	68.0	68.0	68.0
Pressure, psia (torr)		14.7	14.7	14.7	14.7	14.7	14.7	14.7	14.7	14.7	14.7
Density, g/cc (lb/ft3)		0.97	1.05			0.87	0.87	1.08	1.00	0.82	1.15
Viscosity, cP (CSt)											
Molar Yield (Overall)		98.0%			(92.2%)						

Reactor Nom. Volume (gal): 4,000.0
 Reactor Filled Percentage: 52%

Aventis: Cyclanilide--Huls Technology Basis--One (1) Centrifuge Option
Cycle Time Analysis

		<u>Step Cycle Time</u>	<u>Vessel Cycle Time</u>	Rate Limiting Time 55.4 hours
Premix Prep (R-1107)	Charge Toluene	0.5	Σ = 2.8	Total Batch Time Req'd 91.8 hours
	Charge 2,4 DCA	1.3 [Drum]		
	Mix/Hold	1.0		
Coupling Reaction (R-1107)	Charge Premix	0.4	Σ = 9.0	Notes: nn.n indicates calculated value, otherwise value is estimated
	Draw Vacuum	0.3		
	Heat to 56-59°C	0.8		
	Charge Na Methoxide	3.0		
	Distill MeOH/Toluene Azeotrope	2.0		
	Cool to 60-65°C	1.0		
	Charge Water	0.0		
	Transfer to Hydrolysis Rxtr	1.5		
Hydrolysis Reaction (R-1109)	Charge Water	1.5	Σ = 10.0	
	Heat/Reflux	3.0		
	Distill MeOH	2.5		
	Cool Rxtr <50°C	1.0		
	Sample/NaOH Adjust	0.0		
	Phase Separate / Transfer	2.0		
Precipitation (R-1111)	Cool <25°C	1.0	Σ = 6.0	
	Charge Formic Acid	3.0		
	Mix	0.5		
	Sample/Results	0.5		
	Transfer	0.5		
Centrifugation (R-1110, F-1254)	Centrifuge Batch	55.4	Σ = 55.4 (100 kg plow per 8 hrs)	
Drying	Charge 1.5 batches	1.0	Σ = 8.5	
	Dry Batch	6.0		
	Packout	1.5		

COST ESTIMATE SUMMARY



PAGE 1 of 3
DATE: 16-Mar-00

PROJECT: CYCLANILIDE
PROJECT ENGINEER: M. REINSAGER
LABOR RATE: \$35.00

REV.

	QTY	UNIT	UNIT MH	TOTAL MH	LABOR	MATERIAL	TOTAL
1.0 SITE WORK							
DEMOLITION	2	LOT	80.00	160	\$5,600.00	\$1,500.00	\$7,100.00
PAVING		SF					\$0.00
CONCRETE		YD	15.00	0	\$0.00	\$0.00	\$0.00
DRAINAGE		LOT	80.00	0	\$0.00	\$0.00	\$0.00
EARTHWORK		YD	15.00	0	\$0.00	\$0.00	\$0.00
SUBTOTAL				160	\$5,600.00	\$1,500.00	\$7,100.00
2.0 CIVIL							
FOUNDATIONS	10	LOT	40.00	400	\$14,000.00	\$5,000.00	\$19,000.00
STRUCTURAL (GALVANIZED)	25000	WT	0.04	1000	\$35,000.00	\$18,750.00	\$53,750.00
PIPE RACKS	6000	WT	0.08	375	\$13,125.00	\$3,750.00	\$16,875.00
STRUCTURAL PAINTING		FT^2	0.03	0	\$0.00	\$0.00	\$0.00
GRATING	2000	FT^2	0.20	400	\$14,000.00	\$20,000.00	\$34,000.00
SUBTOTAL				2175	\$76,125.00	\$47,600.00	\$123,625.00
3.0 REACTORS (COILED/JACKETED)							
300 GALLON GLASS		EA					\$0.00
500 GALLON GLASS		EA					\$0.00
1000 GALLON GLASS		EA					\$0.00
2000 GALLON GLASS		EA	35.00	0	\$0.00	\$0.00	\$0.00
3000 GALLON GLASS		EA	40.00	0	\$0.00	\$0.00	\$0.00
4000 GALLON GLASS		EA	40.00	0	\$0.00	\$0.00	\$0.00
COLUMN (10FT)	1	EA	120.00	120	\$4,200.00	\$7,000.00	\$11,200.00
COLUMNS (10 FT PACKED)	2	EA	80.00	160	\$5,600.00	\$40,000.00	\$45,600.00
RELOCATED VESSELS		EA	40.00	0	\$0.00	\$0.00	\$0.00
REACTOR SUPPORTS/STEEL	1	EA	110.00	110	\$3,850.00	\$1,500.00	\$5,350.00
REACTOR REPAIR/MODIFICATION		EA	110.00	0	\$0.00	\$0.00	\$0.00
VESSEL INSULATION		SF	0.70	0	\$0.00	\$0.00	\$0.00
SUBTOTAL				390	\$13,650.00	\$48,500.00	\$62,150.00
4.0 VESSELS/TANKS							
VESSEL REPAIRS		EA	25.00	0	\$0.00	\$0.00	\$0.00
HOPPER SS		EA	40.00	0	\$0.00	\$0.00	\$0.00
VESSEL GLASS (2000 GAL)		EA	60.00	0	\$0.00	\$0.00	\$0.00
VESSEL GLASS (6000 GAL)		EA	60.00	0	\$0.00	\$0.00	\$0.00
VESSEL GLASS (8000 GAL)		EA	60.00	0	\$0.00	\$0.00	\$0.00
VESSEL, FURAN (15000 GAL)		EA	60.00	0	\$0.00	\$0.00	\$0.00
VESSEL, FURAN (12000 GAL)		EA	60.00	0	\$0.00	\$0.00	\$0.00
VESSEL, FURAN (8000 GAL)		EA	60.00	0	\$0.00	\$0.00	\$0.00
API, SS (12000 GAL)		EA	60.00	0	\$0.00	\$0.00	\$0.00
API, SS (18000 GAL)		EA	80.00	0	\$0.00	\$0.00	\$0.00
API, SS (1500 GAL)		EA	60.00	0	\$0.00	\$0.00	\$0.00
MOLE SEIVE	1	EA	60.00	60	\$2,100.00	\$8,000.00	\$10,100.00
VESSEL, SS (400 GAL)	4	EA	80.00	320	\$11,200.00	\$28,000.00	\$39,200.00
VESSEL, SS (1500 GAL)		EA	80.00	0	\$0.00	\$0.00	\$0.00
VESSEL, SS (5000 GAL)		EA	80.00	0	\$0.00	\$0.00	\$0.00
VESSEL INSULATION		SF	0.70	0	\$0.00	\$0.00	\$0.00
SUBTOTAL				380	\$13,300.00	\$36,000.00	\$49,300.00

COST ESTIMATE SUMMARY

PROJECT: CYCLANILIDE

DATE: 16-Mar-00

PROJECT ENGINEER: M. REINSAGER

REV.

LABOR RATE: \$35.00

	QTY	UNIT	UNIT MH	TOTAL MH	LABOR	MATERIAL	TOTAL
6.0 HEAT EXCHANGERS							
CARBATE (50 FT^2)		EA	50.00	0	\$0.00	\$0.00	\$0.00
CARBATE, TFE IMP. (100 FT^2)		EA	50.00	0	\$0.00	\$0.00	\$0.00
CARBATE (200 FT^2)		EA	50.00	0	\$0.00	\$0.00	\$0.00
CARBATE, TFE IMP. (600 FT^2)		EA	50.00	0	\$0.00	\$0.00	\$0.00
CARBATE (1000 FT^2)		EA	60.00	0	\$0.00	\$0.00	\$0.00
TUBE/SHELL, HAST, (1000 FT^2)		EA	60.00	0	\$0.00	\$0.00	\$0.00
TUBE/SHELL, SS (60 FT^2)		EA	50.00	0	\$0.00	\$0.00	\$0.00
TUBE/SHELL, SS (350 FT^2)	3	EA	60.00	180	\$6,300.00	\$24,000.00	\$30,300.00
TUBE/SHELL, SS (600 FT^2)		EA	50.00	0	\$0.00	\$0.00	\$0.00
COOLING TOWERS		EA	350.00	0	\$0.00	\$0.00	\$0.00
CL2 VAPORIZER		EA	60.00	0	\$0.00	\$0.00	\$0.00
SUBTOTAL				180	\$6,300.00	\$24,000.00	\$30,300.00
6.0 ROTATING EQUIPMENT							
PUMPS (50 GPM)	2	EA	160.00	320	\$11,200.00	\$18,000.00	\$29,200.00
PUMPS (350 GPM)	1	EA	40.00	40	\$1,400.00	\$12,000.00	\$13,400.00
PUMPS (100 GPM), TFE LINED		EA	40.00	0	\$0.00	\$0.00	\$0.00
BLOWER		EA					\$0.00
SCREW CONVEYOR	1	EA	80.00	80	\$2,800.00	\$5,000.00	\$7,800.00
VAC PUMP, AUTO SS		EA	80.00	0	\$0.00	\$0.00	\$0.00
NUTSCHE		EA	120.00	0	\$0.00	\$0.00	\$0.00
AGITATOR - HAST-C		EA	80.00	0	\$0.00	\$0.00	\$0.00
SUBTOTAL				440	\$15,400.00	\$35,000.00	\$50,400.00
7.0 FILTERING EQUIPMENT							
CARTRIDGE FILTER		EA	20.00	0	\$0.00	\$0.00	\$0.00
CARTRIDGE		EA					\$0.00
FUNDA (105 FT^2)		EA	60.00	0	\$0.00	\$0.00	\$0.00
CENTRIFUGE - BASKET (HAST-C)		EA	120.00	0	\$0.00	\$0.00	\$0.00
SUBTOTAL				0	\$0.00	\$0.00	\$0.00
8.0 PIPING							
PIPING (1-2 IN), TFE/CS		LF	1.40	0	\$0.00	\$0.00	\$0.00
PIPING (3-6 IN), TFE/CS		LF	1.70	0	\$0.00	\$0.00	\$0.00
PIPING (8-12 IN), SS		LF	2.70	0	\$0.00	\$0.00	\$0.00
PIPING (.5-.75 IN), SS		LF	0.70	0	\$0.00	\$0.00	\$0.00
PIPING (1-2 IN), SS	900	LF	1.20	1080	\$37,800.00	\$11,700.00	\$49,500.00
PIPING (3-6 IN), SS	120	LF	2.50	300	\$10,500.00	\$2,640.00	\$13,140.00
PIPING (4-6 IN), CS		LF	1.50	0	\$0.00	\$0.00	\$0.00
PIPING (.5-.75 IN), CS	200	LF	0.70	140	\$4,900.00	\$1,200.00	\$6,100.00
PIPING (1-2 IN), CS	100	LF	1.00	100	\$3,500.00	\$700.00	\$4,200.00
PIPING (2-4 IN), FIBERCAST		LF	2.00	0	\$0.00	\$0.00	\$0.00
VALVES - TFE LINED (3/4-1 IN)		EA		0	\$0.00	\$0.00	\$0.00
VALVES - TFE LINED (1-2 IN)		EA		0	\$0.00	\$0.00	\$0.00
VALVES - TFE LINED (3-6 IN)		EA		0	\$0.00	\$0.00	\$0.00
VALVES - CS (.75 IN)	20	EA		0	\$0.00	\$2,000.00	\$2,000.00
VALVES - CS (1-2 IN)	10	EA		0	\$0.00	\$1,500.00	\$1,500.00
VALVES - CS (3-6 IN)		EA		0	\$0.00	\$0.00	\$0.00
VALVES - SS (3-6 IN)	2	EA		0	\$0.00	\$1,200.00	\$1,200.00
VALVES - EXOTIC		EA		0	\$0.00	\$0.00	\$0.00

COST ESTIMATE SUMMARY

PAGE 3 of 3

PROJECT: CYCLANILIDE

DATE 16-Mar-00

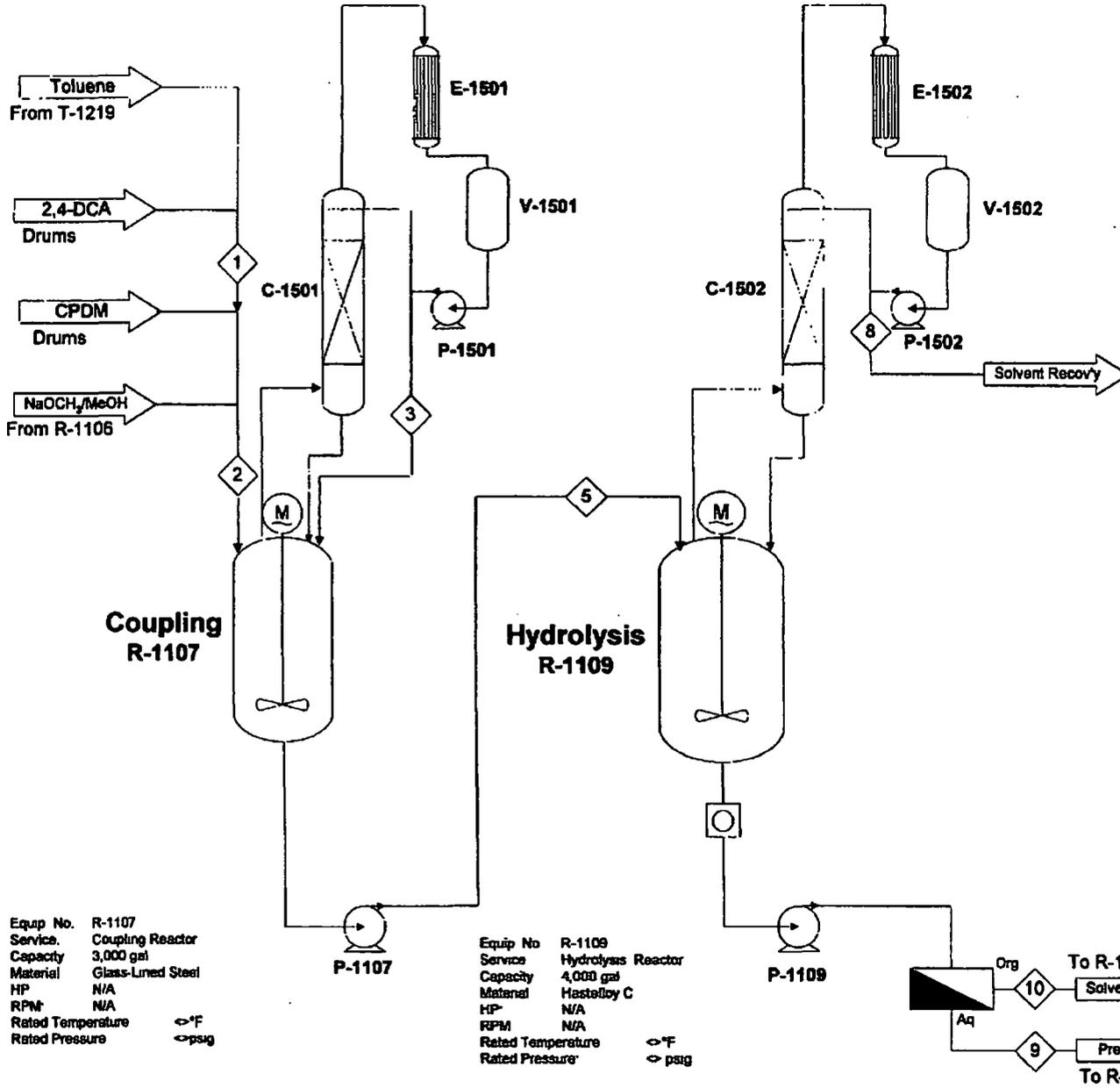
PROJECT ENGINEER M REINSAGER

REV

LABOR RATE \$32.00

	QTY	UNIT	UNIT MH	TOTAL MH	LABOR	MATERIAL	TOTAL
VALVES - SS (1-2 IN)	25	EA		0		\$0.00	\$6,250.00
VALVES - SS (4-6 IN)		EA		0		\$0.00	\$0.00
FITTINGS TFE (1-2 IN)		EA		0		\$0.00	\$0.00
FITTINGS TFE (3-6 IN)		EA		0		\$0.00	\$0.00
INSULATION (2-4 IN)	100	LF	0.40	40	\$1,400.00	\$1,000.00	\$2,400.00
PAINTING		LF	0.20	0	\$0.00	\$0.00	\$0.00
PSV		EA	5.00	0	\$0.00	\$0.00	\$0.00
RUPTURE DISC		EA	5.00	0	\$0.00	\$0.00	\$0.00
STEAM TRACING/INS.	150	LF	0.50	75	\$2,625.00	\$1,200.00	\$3,825.00
PIPING MISC (HANGERS ETC)	5	LOT	40.00	200	\$7,000.00	\$4,000.00	\$11,000.00
HOT WATER MIXER		LOT	20.00	0	\$0.00	\$0.00	\$0.00
SUBTOTAL				1935	\$67,725.00	\$33,390.00	\$101,115.00
9.0 ELECTRIC/INSTRUMENTATION							
SCALE	1	EA	20.00	20	\$700.00	\$2,500.00	\$3,200.00
MOTOR (20-40 HP)	3	EA	24.00	72	\$2,520.00	\$4,500.00	\$7,020.00
WIRING/CONDUIT/TRAY	500	LF	0.70	350	\$12,250.00	\$6,000.00	\$18,250.00
FLOW INST (MICRO-MOTION)	4	EA	48.00	192	\$6,720.00	\$20,000.00	\$26,720.00
FLOW INSTRUMENTS		EA	10.00	0	\$0.00	\$0.00	\$0.00
PRESSURE INSTRUMENTS/CTRL		EA	50.00	0	\$0.00	\$0.00	\$0.00
LEVEL INSTRUMENTS	4	EA	42.00	168	\$5,880.00	\$6,000.00	\$11,880.00
GAUGES	10	EA	0.80	8	\$280.00	\$750.00	\$1,030.00
TEMP INDICATOR	5	EA	2.00	10	\$350.00	\$1,000.00	\$1,350.00
CONTROL VALVES	4	EA	24.00	96	\$3,360.00	\$8,000.00	\$11,360.00
PRESSURE REGULATORS	2	EA	8.00	16	\$560.00	\$1,000.00	\$1,560.00
CONTROLLERS	4	EA	12.00	48	\$1,680.00	\$3,200.00	\$4,880.00
INTERLOCKS (MINIMAL)	6	EA	10.00	60	\$2,100.00	\$1,800.00	\$3,900.00
DCS EQUIPMENT/CONFIGURATION		EA	120.00	0	\$0.00	\$0.00	\$0.00
CONTROL ROOM/MCC		EA	650.00	0	\$0.00	\$0.00	\$0.00
ELECTRICAL MISC	2	LOT	120.00	240	\$8,400.00	\$4,000.00	\$12,400.00
SWITCHES	6	EA	10.00	60	\$2,100.00	\$1,200.00	\$3,300.00
SUBTOTAL				1340	\$46,900.00	\$59,950.00	\$106,850.00
10.0 INSPECTION/ENGINEERING							
VESSEL INSPECTIONS		EA			\$0.00		\$0.00
ENGINEERING/DCS CONFIG	15	LOT	40.00	600	\$21,000.00		\$21,000.00
DRAFTING/DESIGN	12	LOT	40.00	480	\$16,800.00		\$16,800.00
SUBTOTAL				1080	\$37,800.00	\$0.00	\$37,800.00
11.0 RENTALS							
CRANE	3	LOT				\$4,500.00	\$4,500.00
EQUIPMENT		LOT				\$0.00	\$0.00
FREIGHT (ALL ABOVE)	6	LOT				\$9,000.00	\$9,000.00
12.0 MISCELLANEOUS							
LAB EQUIPMENT		LOT				\$0.00	\$0.00
SUBTOTAL						\$9,000.00	\$9,000.00
SUBTOTAL				8080	\$282,800.00	\$294,840.00	\$577,640.00
OVERTIME (50%)							
CONTINGENCY (40%)							
					\$113,120.00	\$117,936.00	\$231,056.00
TOTAL					\$395,920.00	\$412,776.00	\$808,696.00

***Maximum
Productivity
Option***



Equip No. R-1107
 Service. Coupling Reactor
 Capacity 3,000 gal
 Material Glass-Lined Steel
 HP N/A
 RPM N/A
 Rated Temperature ◊°F
 Rated Pressure ◊psig

Equip No P-1107 (NEW)
 Service Coupling Transfer
 Capacity 150 gpm @ 70' TDH
 Material 316 SS
 HP TBD
 RPM TBD
 Rated Temperature 400°F
 Rated Pressure TBD

Equip No R-1109
 Service Hydrolysis Reactor
 Capacity 4,000 gal
 Material Hastelloy C
 HP N/A
 RPM N/A
 Rated Temperature ◊°F
 Rated Pressure ◊psig

Equip No P-1109
 Service Hydrolysis Transfer
 Capacity 300 gpm @ 94' TDH
 Material Hastelloy C
 HP ◊
 RPM ◊
 Rated Temperature ◊°F
 Rated Pressure ◊psig

Equip No C-1501 (NEW)
 Service Coupling Column
 Capacity 24" dia x 10' T/T
 Material 316L SS
 HP N/A
 RPM N/A
 Rated Temperature 400°F
 Rated Pressure 30 psig & FV

Equip No E-1501 (NEW)
 Service Coupling Condenser
 Capacity 300 sq ft
 Material 316LSS tube/CS shell
 HP N/A
 RPM N/A
 Rated Temperature 400°F
 Rated Pressure 30 psig & FV

Equip No V-1501 (NEW)
 Service Coupling Receiver
 Capacity 350 gal
 Material 316L SS
 HP N/A
 RPM N/A
 Rated Temperature 400°F
 Rated Pressure 30 psig & FV

Equip No P-1501 (NEW)
 Service Coupling Recr Pump
 Capacity 30 gpm @ 40' TDH
 Material 316 SS
 HP TBD
 RPM TBD
 Rated Temperature ◊°F
 Rated Pressure ◊psig

Equip No C-1502 (NEW)
 Service Coupling Column
 Capacity 24" dia x 10' T/T
 Material 316L SS
 HP N/A
 RPM N/A
 Rated Temperature 400°F
 Rated Pressure 30 psig & FV

Equip No E-1502 (NEW)
 Service Coupling Condenser
 Capacity 300 sq ft
 Material 316LSS tube/CS shell
 HP N/A
 RPM N/A
 Rated Temperature 400°F
 Rated Pressure 30 psig & FV

Equip No V-1502 (NEW)
 Service Coupling Receiver
 Capacity 350 gal
 Material 316L SS
 HP N/A
 RPM N/A
 Rated Temperature 400°F
 Rated Pressure 30 psig & FV

Equip No P-1502 (NEW)
 Service Coupling Recr Pump
 Capacity 30 gpm @ 40' TDH
 Material 316 SS
 HP TBD
 RPM TBD
 Rated Temperature ◊°F
 Rated Pressure ◊psig



Title: Cyclanilide 90946 Process Flow Diagram
 Page 1 of 4 Pages

Drawn: DCG	Scale: None	Date: 03/15/00	Rev: B
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Aventis: Cyclanilide-Huls Technology Basis-Two (2) Centrifuge Option
Heat & Mass Balance

Assumptions:

- | | |
|--|--|
| 1. Process overall 80% O.S.T. | 6. All Yield calculations based on DCA |
| 2. 0.5% Material Loss through centrifugation | 7. -- |
| 3. Centrifuge discharge @ 20% LOD | 8. -- |
| 4. Centrifugation Cycle=45 minutes @ 400 lb./p/low | 9. -- |
| 5. Dryer discharge at 0.5% LOD | 10. -- |

Summary of Results	
Final Product lb/bx:	2,936 lb
Limiting Cycle Time:	27.7 hours
Final Product lb/day:	2,543 lb/day
Final Product MT/day:	1.2 MT/day

R-1107

R-1109

R-1111

Stream No.		1	2	3	4	5	6	7	8	9	10	11
Description		Premix Initial Charge	R-7 Charge + Premix	MeOH Strip	O/H Charged Back	Intermed Xferred to R-9	R-9 Water Charge	R-9 Hydr. Intermediate	MeOH Distillat'n	Intermed. Xferred to R-11	Hydrol. Org. Phase to Rec'y	R-11 Acid Charge
Component	MW											
Raw Materials												
CPDM	158.10		2,292.8									
2,4 DCA	162.00	2,292.8	2,292.8									
NaOCH3	54.00		866.7									
MeOH	32.00		2,022.3									
H2O	18.00						11,464.0	11,464.0		11,464.0		
NaOH	40.00							232.3				
Formic Acid	46.03											1,146.4
Xylene	106.17	3,439.2	11,750.6	160.5	160.5	11,750.6		11,750.6			11,750.6	
(By) Products												
Na-CPMPA	310.10					4,339.8						
MeOH	32.00			3,049.4	3,049.4	3,049.4		447.8	447.8			
Na-RPA 90946	286.10							4,040.2		4,040.2		
RPA 90946	274.10											
NaCHO2	68.01											
Others	--											
Stream Weight, lb/batch		5,732.0	19,225.2	3,209.9	3,209.9	19,139.8	11,464.0	27,935.1	447.8	15,504.3	11,750.6	1,146.4
Stream Volume, gal (ft3)		793.8	2,442.3	484.6	385.3	2,703.2	1,376.2	3,457.3	67.9	1,918.8	1,623.3	116.6
Temperature, °F		100.0	136.0	146.3	145.0	145.0	140.0	77.0	212.0	68.0	77.0	77.0
Pressure, psia (torr)		14.7	14.7	(270)	14.7	14.7	14.7	14.7	14.7	14.7	14.7	14.7
Density, g/cc (lb/ft3)		0.87	0.95	0.80	1.00	0.85	1.00	0.97	0.79	0.97	0.87	1.18
Viscosity, cP (cSt)												
Molar Yield (Overall)						96.5%		97.5%				
Reactor Nom. Volume (gal):			3,000.0			3,000.0		4,000.0		3,000.0		
Reactor Filled Percentage:			81%			90%		86%		64%		

Aventis: Cyclanilide—Huls Technology Basis—Two (2) Centrifuge Option
Cycle Time Analysis

		<u>Step Cycle Time</u>	<u>Vessel Cycle Time</u>	Rate Limiting Time 27.7 hours
Premix Prep (R-1107)	Charge Toluene	<u>0.5</u>	Σ = 2.8	
	Charge 2,4 DCA	<u>1.3</u> [Drum]		
	Mix/Hold	1.0		
Coupling Reaction (R-1107)	Charge Premix	<u>0.4</u>	Σ = 9.0	
	Draw Vacuum	0.3		
	Heat to 56-59°C	0.8		
	Charge Na Methoxide	3.0		
	Distill MeOH/Toluene Azeotrope	2.0		
	Cool to 60-65°C	1.0		
	Charge Water	0.0		
	Transfer to Hydrolysis Rxtr	1.5		
Hydrolysis Reaction (R-1109)	Charge Water	<u>1.5</u>	Σ = 10.0	
	Heat/Reflux	3.0		
	Distill MeOH	2.5		
	Cool Rxtr <50°C	1.0		
	Sample/NaOH Adjust	0.0		
	Phase Separate / Transfer	2.0		
Precipitation (R-1111)	Cool <25°C	1.0	Σ = 6.0	
	Charge Formic Acid	3.0		
	Mix	0.5		
	Sample/Results	0.5		
	Transfer	0.5		
Centrifugation (R-1110, F-1254)	Centrifuge Batch	<u>27.7</u>	Σ = 27.7 (100 kg plow per 8 hrs)	
Drying	Charge 1.5 batches	1.0	Σ = 8.5	
	Dry Batch	6.0		
	Packout	1.5		

Total Batch 64.1 hours
 Time Req'd

Notes:
nn.n indicates calculated value,
 otherwise value is estimated

RECORDED

COST ESTIMATE SUMMARY

PAGE 1 of 3

PROJECT: **CYCLANILIDE V3 (CENTRIFUGE)**

DATE: 16-Mar-00

PROJECT ENGINEER: **M. REINSAGER**

REV:

LABOR RATE: \$35.00

	QTY	UNIT	UNIT MH	TOTAL MH	LABOR	MATERIAL	TOTAL
1.0 SITE WORK							
DEMOLITION	4	LOT	80.00	320	\$11,200.00	\$3,000.00	\$14,200.00
PAVING		SF					\$0.00
CONCRETE	16	YD	15.00	240	\$8,400.00	\$1,760.00	\$10,160.00
DRAINAGE		LOT	80.00	0	\$0.00	\$0.00	\$0.00
EARTHWORK		YD	15.00	0	\$0.00	\$0.00	\$0.00
SUBTOTAL				560	\$19,600.00	\$4,760.00	\$24,360.00
2.0 CIVIL							
FOUNDATIONS	10	LOT	40.00	400	\$14,000.00	\$5,000.00	\$19,000.00
STRUCTURAL (GALVANIZED)	38000	WT	0.04	1520	\$53,200.00	\$30,400.00	\$83,600.00
PIPE RACKS	6500	WT	0.08	488	\$17,062.50	\$4,875.00	\$21,937.50
STRUCTURAL PAINTING		FT^2	0.03	0	\$0.00	\$0.00	\$0.00
GRATING	1000	FT^2	0.20	200	\$7,000.00	\$10,000.00	\$17,000.00
SUBTOTAL				2608	\$91,262.50	\$50,275.00	\$141,537.50
3.0 REACTORS (COILED/JACKETED)							
300 GALLON GLASS		EA					\$0.00
500 GALLON GLASS		EA					\$0.00
1000 GALLON GLASS		EA					\$0.00
2000 GALLON GLASS		EA	35.00	0	\$0.00	\$0.00	\$0.00
3000 GALLON GLASS		EA	40.00	0	\$0.00	\$0.00	\$0.00
4000 GALLON GLASS		EA	40.00	0	\$0.00	\$0.00	\$0.00
COLUMN (10FT)	1	EA	120.00	120	\$4,200.00	\$7,000.00	\$11,200.00
COLUMNS (10 FT PACKED)	2	EA	80.00	160	\$5,600.00	\$40,000.00	\$45,600.00
RELOCATED VESSELS		EA	40.00	0	\$0.00	\$0.00	\$0.00
REACTOR SUPPORTS/STEEL	1	EA	110.00	110	\$3,850.00	\$1,500.00	\$5,350.00
REACTOR REPAIR/MODIFICATION		EA	110.00	0	\$0.00	\$0.00	\$0.00
VESSEL INSULATION		SF	0.70	0	\$0.00	\$0.00	\$0.00
SUBTOTAL				380	\$13,650.00	\$48,600.00	\$62,250.00
4.0 VESSELS/TANKS							
VESSEL REPAIRS		EA	25.00	0	\$0.00	\$0.00	\$0.00
HOPPER SS		EA	40.00	0	\$0.00	\$0.00	\$0.00
VESSEL GLASS (2000 GAL)		EA	60.00	0	\$0.00	\$0.00	\$0.00
VESSEL GLASS (6000 GAL)		EA	60.00	0	\$0.00	\$0.00	\$0.00
VESSEL GLASS (8000 GAL)		EA	60.00	0	\$0.00	\$0.00	\$0.00
VESSEL, FURAN (15000 GAL)		EA	60.00	0	\$0.00	\$0.00	\$0.00
VESSEL, FURAN (12000 GAL)		EA	60.00	0	\$0.00	\$0.00	\$0.00
VESSEL, FURAN (6000 GAL)		EA	60.00	0	\$0.00	\$0.00	\$0.00
API, SS (12000 GAL)		EA	60.00	0	\$0.00	\$0.00	\$0.00
API, SS (16000 GAL)		EA	80.00	0	\$0.00	\$0.00	\$0.00
API, SS (1500 GAL)		EA	60.00	0	\$0.00	\$0.00	\$0.00
MOLE SEIVE	1	EA	60.00	60	\$2,100.00	\$8,000.00	\$10,100.00
VESSEL, SS (400 GAL)	4	EA	80.00	320	\$11,200.00	\$28,000.00	\$39,200.00
VESSEL, SS (1500 GAL)		EA	80.00	0	\$0.00	\$0.00	\$0.00
VESSEL, SS (5000 GAL)		EA	80.00	0	\$0.00	\$0.00	\$0.00
VESSEL INSULATION		SF	0.70	0	\$0.00	\$0.00	\$0.00
SUBTOTAL				380	\$13,300.00	\$36,000.00	\$49,300.00

GOST ESTIMATE SUMMARY

PROJECT: CYCLANILIDE V3 (CENTRIFUGE)

DATE: 16-Mar-00

PROJECT ENGINEER: M. REINSAGER

REV.

LABOR RATE: \$35.00

	QTY	UNIT	UNIT MH	TOTAL MH	LABOR	MATERIAL	TOTAL
5.0 HEAT EXCHANGERS							
CARBATE (60 FT^2)		EA	50.00	0	\$0.00	\$0.00	\$0.00
CARBATE, TFE IMP. (100 FT^2)		EA	50.00	0	\$0.00	\$0.00	\$0.00
CARBATE (200 FT^2)		EA	50.00	0	\$0.00	\$0.00	\$0.00
CARBATE, TFE IMP. (500 FT^2)		EA	50.00	0	\$0.00	\$0.00	\$0.00
CARBATE (1000 FT^2)		EA	60.00	0	\$0.00	\$0.00	\$0.00
TUBE/SHELL, HAST, (1000 FT^2)		EA	60.00	0	\$0.00	\$0.00	\$0.00
TUBE/SHELL, SS (50 FT^2)		EA	50.00	0	\$0.00	\$0.00	\$0.00
TUBE/SHELL, SS (350 FT^2)	3	EA	60.00	180	\$6,300.00	\$24,000.00	\$30,300.00
TUBE/SHELL, SS (600 FT^2)		EA	50.00	0	\$0.00	\$0.00	\$0.00
COOLING TOWERS		EA	350.00	0	\$0.00	\$0.00	\$0.00
CL2 VAPORIZER		EA	60.00	0	\$0.00	\$0.00	\$0.00
SUBTOTAL				180	\$6,300.00	\$24,000.00	\$30,300.00
6.0 ROTATING EQUIPMENT							
PUMPS (50 GPM)	2	EA	160.00	320	\$11,200.00	\$18,000.00	\$29,200.00
PUMPS (350 GPM)	1	EA	40.00	40	\$1,400.00	\$12,000.00	\$13,400.00
PUMPS (100 GPM), TFE LINED		EA	40.00	0	\$0.00	\$0.00	\$0.00
BLOWER		EA					\$0.00
SCREW CONVEYOR	1	EA	80.00	80	\$2,800.00	\$5,000.00	\$7,800.00
VAC PUMP, AUTO SS		EA	80.00	0	\$0.00	\$0.00	\$0.00
NUTSCHE		EA	120.00	0	\$0.00	\$0.00	\$0.00
CENTRIFUGE (48" SS)		EA	80.00	0	\$0.00	\$0.00	\$0.00
SUBTOTAL				440	\$15,400.00	\$35,000.00	\$50,400.00
7.0 FILTERING EQUIPMENT							
CARTRIDGE FILTER		EA	20.00	0	\$0.00	\$0.00	\$0.00
CARTRIDGE		EA					\$0.00
FUNDA (105 FT^2)		EA	60.00	0	\$0.00	\$0.00	\$0.00
CENTRIFUGE - BASKET (SS)	1	EA	240.00	240	\$8,400.00	\$70,000.00	\$78,400.00
SUBTOTAL				240	\$8,400.00	\$70,000.00	\$78,400.00
8.0 PIPING							
PIPING (1-2 IN), TFE/CS		LF	1.40	0	\$0.00	\$0.00	\$0.00
PIPING (3-6 IN), TFE/CS		LF	1.70	0	\$0.00	\$0.00	\$0.00
PIPING (8-12 IN), SS		LF	2.70	0	\$0.00	\$0.00	\$0.00
PIPING (.5-.75 IN), SS		LF	0.70	0	\$0.00	\$0.00	\$0.00
PIPING (1-2 IN), SS	1300	LF	1.20	1560	\$54,600.00	\$16,900.00	\$71,500.00
PIPING (3-6 IN), SS	300	LF	2.50	750	\$26,250.00	\$6,600.00	\$32,850.00
PIPING (4-6 IN), CS		LF	1.50	0	\$0.00	\$0.00	\$0.00
PIPING (.5-.75 IN), CS	250	LF	0.70	175	\$6,125.00	\$1,500.00	\$7,625.00
PIPING (1-2 IN), CS	100	LF	1.00	100	\$3,500.00	\$700.00	\$4,200.00
		LF	2.00	0	\$0.00	\$0.00	\$0.00
PIPING (2-4 IN), FIBERCAST		LF	2.00	0	\$0.00	\$0.00	\$0.00
VALVES - TFE LINED (3/4-1 IN)		EA		0	\$0.00	\$0.00	\$0.00
VALVES - TFE LINED (1-2 IN)		EA		0	\$0.00	\$0.00	\$0.00
VALVES - TFE LINED (3-6 IN)		EA		0	\$0.00	\$0.00	\$0.00
VALVES - CS (.75 IN)	20	EA		0	\$0.00	\$2,000.00	\$2,000.00
VALVES - CS (1-2 IN)	10	EA		0	\$0.00	\$1,500.00	\$1,500.00
VALVES - CS (3-6 IN)		EA		0	\$0.00	\$0.00	\$0.00
VALVES - SS (3-6 IN)	4	EA		0	\$0.00	\$2,400.00	\$2,400.00
VALVES - EXOTIC		EA		0	\$0.00	\$0.00	\$0.00

COST ESTIMATE SUMMARY

PROJECT: CYCLANILIDE V3 (CENTRIFUGE)

DATE 16-Mar-00

PROJECT ENGINEER M REINSAGER

REV

LABOR RATE \$35 00

	QTY	UNIT	UNIT MH	TOTAL MH	LABOR	MATERIAL	TOTAL
VALVES - SS (1-2 IN)	35	EA		0	\$0 00	\$8,750 00	\$8,750.00
VALVES - SS (4-6 IN)		EA		0	\$0 00	\$0 00	\$0 00
FITTINGS, TFE (1-2 IN)		EA		0	\$0 00	\$0 00	\$0 00
FITTINGS, TFE (3-6 IN)		EA		0	\$0 00	\$0 00	\$0 00
INSULATION (2-4 IN)	100	LF	0 40	40	\$1,400 00	\$1,000 00	\$2,400.00
PAINTING		LF	0 20	0	\$0 00	\$0 00	\$0 00
PSV		EA	5 00	0	\$0 00	\$0 00	\$0 00
RUPTURE DISC		EA	5 00	0	\$0 00	\$0 00	\$0 00
STEAM TRACING/INS	150	LF	0 50	75	\$2,625 00	\$1,200 00	\$3,825.00
PIPING MISC (HANGERS, ETC)	8	LOT	40 00	320	\$11,200 00	\$6,400 00	\$17,600 00
HOT WATER MIXER		LOT	20 00	0	\$0 00	\$0 00	\$0 00
SUBTOTAL				3020	\$105,700.00	\$48,950.00	\$154,650.00
9.0 ELECTRIC/INSTRUMENTATION							
SCALE	1	EA	20 00	20	\$700 00	\$2,500 00	\$3,200 00
MOTOR (20-40 HP)	4	EA	24 00	96	\$3,360 00	\$6,000 00	\$9,360 00
WIRING/CONDUIT/TRAY	800	LF	0 70	560	\$19,600 00	\$9,600 00	\$29,200 00
FLOW INST (MICRO-MOTION)	4	EA	48 00	192	\$6,720 00	\$20,000 00	\$26,720 00
FLOW INSTRUMENTS		EA	10 00	0	\$0 00	\$0 00	\$0 00
PRESSURE INSTRUMENTS/CTRL		EA	50 00	0	\$0 00	\$0 00	\$0 00
LEVEL INSTRUMENTS	4	EA	42 00	168	\$5,880 00	\$6,000 00	\$11,880 00
GUAGES	16	EA	0 80	13	\$448 00	\$1,200 00	\$1,648 00
TEMP INDICATOR	5	EA	2 00	10	\$350 00	\$1,000 00	\$1,350 00
CONTROL VALVES	8	EA	24 00	192	\$6,720 00	\$16,000 00	\$22,720 00
PRESSURE REGULATORS	2	EA	8 00	16	\$560 00	\$1,000 00	\$1,560 00
CONTROLLERS	4	EA	12 00	48	\$1,680 00	\$3,200 00	\$4,880 00
INTERLOCKS (MINIMAL)	8	EA	10 00	80	\$2,800 00	\$2,400 00	\$5,200 00
CENTRIFUGE CONTROL	1	EA	250 00	250	\$8,750 00	\$15,000 00	\$23,750 00
CONTROL ROOM/MCC		EA	650 00	0	\$0 00	\$0 00	\$0 00
ELECTRICAL MISC	4	LOT	160 00	640	\$22,400 00	\$12,000 00	\$34,400 00
SWITCHES	8	EA	10 00	80	\$2,800 00	\$1,600 00	\$4,400 00
SUBTOTAL				2365	\$82,768.00	\$97,500.00	\$180,268.00
10.0 INSPECTION/ENGINEERING							
VESSEL INSPECTIONS		EA			\$0 00		\$0 00
ENGINEERING/DCS CONFIG	20	LOT	40 00	800	\$28,000 00		\$28,000 00
DRAFTING/DESIGN	20	LOT	40 00	800	\$28,000 00		\$28,000 00
SUBTOTAL				1600	\$56,000.00	\$0 00	\$56,000.00
11.0 RENTALS							
CRANE	3	LOT				\$4,500 00	\$4,500 00
EQUIPMENT		LOT				\$0 00	\$0 00
FREIGHT (ALL ABOVE)	6	LOT				\$9,000 00	\$9,000 00
12.0 MISCELLANEOUS							
LAB EQUIPMENT		LOT				\$0 00	\$0 00
SUBTOTAL						\$9,000.00	\$9,000.00
SUBTOTAL				11782.3	\$412,380.50	\$423,985.00	\$836,365.50
OVERTIME (50%)							
CONTINGENCY (40%)							
					\$164,952.20	\$169,594.00	\$334,546.20

TOTAL \$57,332.70 \$593,572.00 \$970,000.00



To: Joe Mancini Date: 3/17/00
Location: Memphis Office Copy to: Chris McGee
Kevin Payne
From: D.C. Guffey Geoff Pratt
Jim Rone
Location: Helena Plant
Extension: 283
Subject: Cyclanilide Process
Reference:

Attached are the flowsheets (w/o recovery and emissions control drawings), material balance, and cost estimate for two Cyclanilide cases: 1) minimum capital and 2) maximum productivity. Please note the productivity numbers are greatly impacted by centrifuge cycle-time data obtained on the Degussa Hüls plant visit.

As you may recall, the Degussa centrifuge cycle is approximately eight (8) hours for a 300 kg batch with each centrifuge payload resulting in approximately 100 kg of wet (~17%) material. Further, the Degussa centrifuge is the same size as the Unit 1 centrifuge (and Unit 5) and operates at speeds typical to the Cedar centrifuge. This means the maximum productivity of the plant is 82.7 lb/hr or 1,984 lb/day (0.9 MT/d) at 100% OST. Taking into account yield and OST, the maximum productivity of the plant is then 1,272 lb/day (0.6 MT/d) regardless of how much crude material is produced in the reactors.

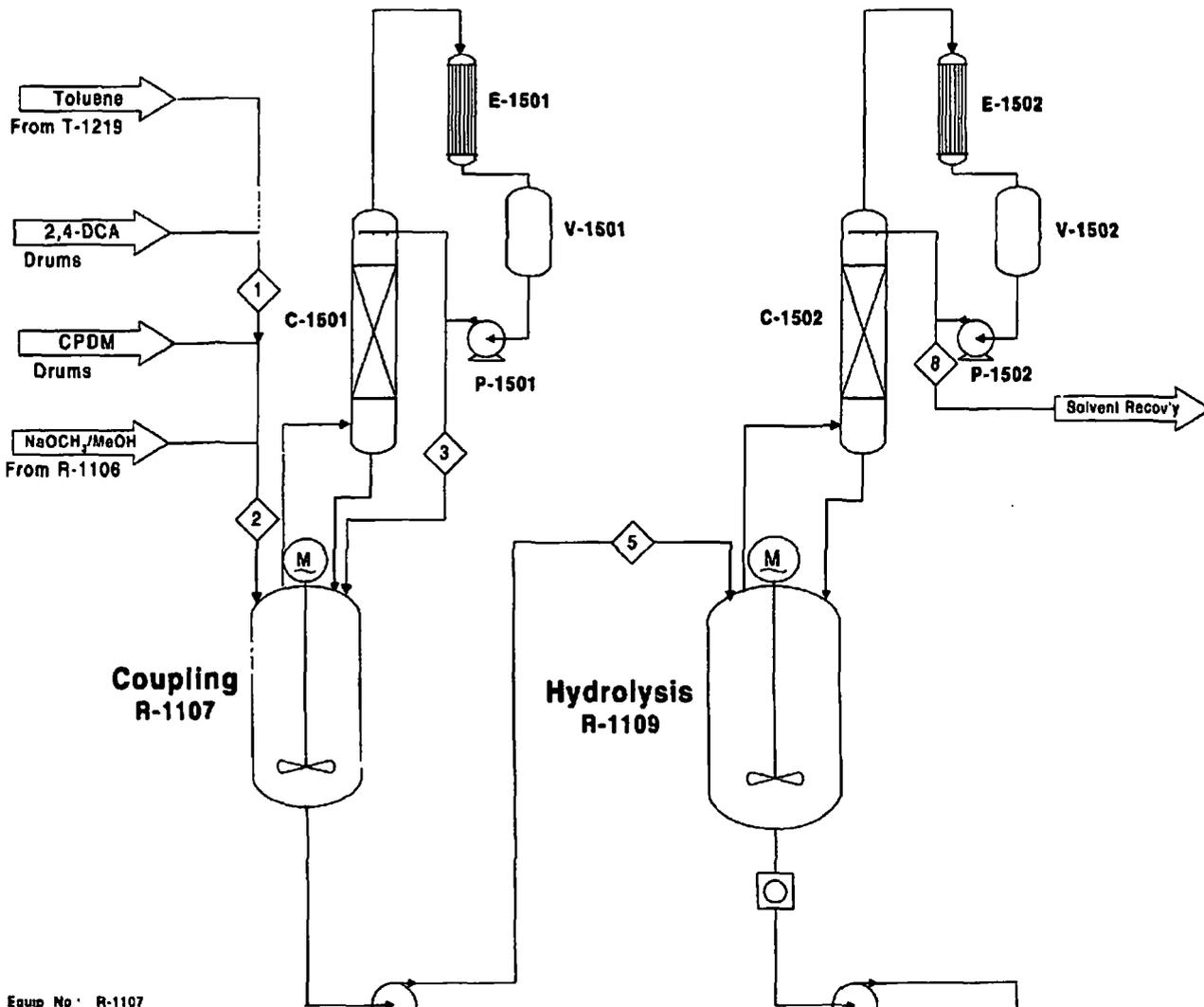
The minimum capital case assumes only one centrifuge is in operation and the cycle time is at least as good as the Degussa process. The capital required for this case is \$809k with a productivity of 0.6 MT/d.

The maximum productivity case installs a second centrifuge—both which operate with cycle times at least as good as the Degussa process. The capital required for this case is \$1.17M with a productivity of 1.2 MT/d.

Installation of yet a third centrifuge is possible but deemed too expensive for the product to bear for the increased productivity.

Please note that the cost estimates are $\pm 40\%$ basis.

***Minimum
Capital
Option***



Equip. No.: R-1107
 Service: Coupling Reactor
 Capacity: 3,000 gal
 Material: Glass-Lined Steel
 HP: N/A
 RPM: N/A
 Rated Temperature: <>°F
 Rated Pressure: <>psig

Equip. No.: P-1107 (NEW)
 Service: Coupling Transfer
 Capacity: 150 gpm @ 70' TDH
 Material: 316 SS
 HP: TBD
 RPM: TBD
 Rated Temperature: 400°F
 Rated Pressure: TBD

Equip. No.: R-1109
 Service: Hydrolysis Reactor
 Capacity: 4,000 gal
 Material: Hastelloy C
 HP: N/A
 RPM: N/A
 Rated Temperature: <>°F
 Rated Pressure: <>psig

Equip. No.: P-1109
 Service: Hydrolysis Transfer
 Capacity: 300 gpm @ 84' TDH
 Material: Hastelloy C
 HP: <>
 RPM: <>
 Rated Temperature: <>°F
 Rated Pressure: <>psig

Equip. No.: C-1501 (NEW)
 Service: Coupling Column
 Capacity: 24" dia x 10' T/T
 Material: 316L SS
 HP: N/A
 RPM: N/A
 Rated Temperature: 400°F
 Rated Pressure: 30 psig & FV

Equip. No.: E-1501 (NEW)
 Service: Coupling Condenser
 Capacity: 300 sq ft
 Material: 316LSS tube/CS shell
 HP: N/A
 RPM: N/A
 Rated Temperature: 400°F
 Rated Pressure: 30 psig & FV

Equip. No.: V-1501 (NEW)
 Service: Coupling Receiver
 Capacity: 350 gal
 Material: 316L SS
 HP: N/A
 RPM: N/A
 Rated Temperature: 400°F
 Rated Pressure: 30 psig & FV

Equip. No.: P-1501 (NEW)
 Service: Coupling Recvr Pump
 Capacity: 30 gpm @ 40' TDH
 Material: 316 SS
 HP: TBD
 RPM: TBD
 Rated Temperature: <>°F
 Rated Pressure: <>psig

Equip. No.: C-1502 (NEW)
 Service: Coupling Column
 Capacity: 24" dia x 10' T/T
 Material: 316L SS
 HP: N/A
 RPM: N/A
 Rated Temperature: 400°F
 Rated Pressure: 30 psig & FV

Equip. No.: E-1502 (NEW)
 Service: Coupling Condenser
 Capacity: 300 sq. ft.
 Material: 316LSS tube/CS shell
 HP: N/A
 RPM: N/A
 Rated Temperature: 400°F
 Rated Pressure: 30 psig & FV

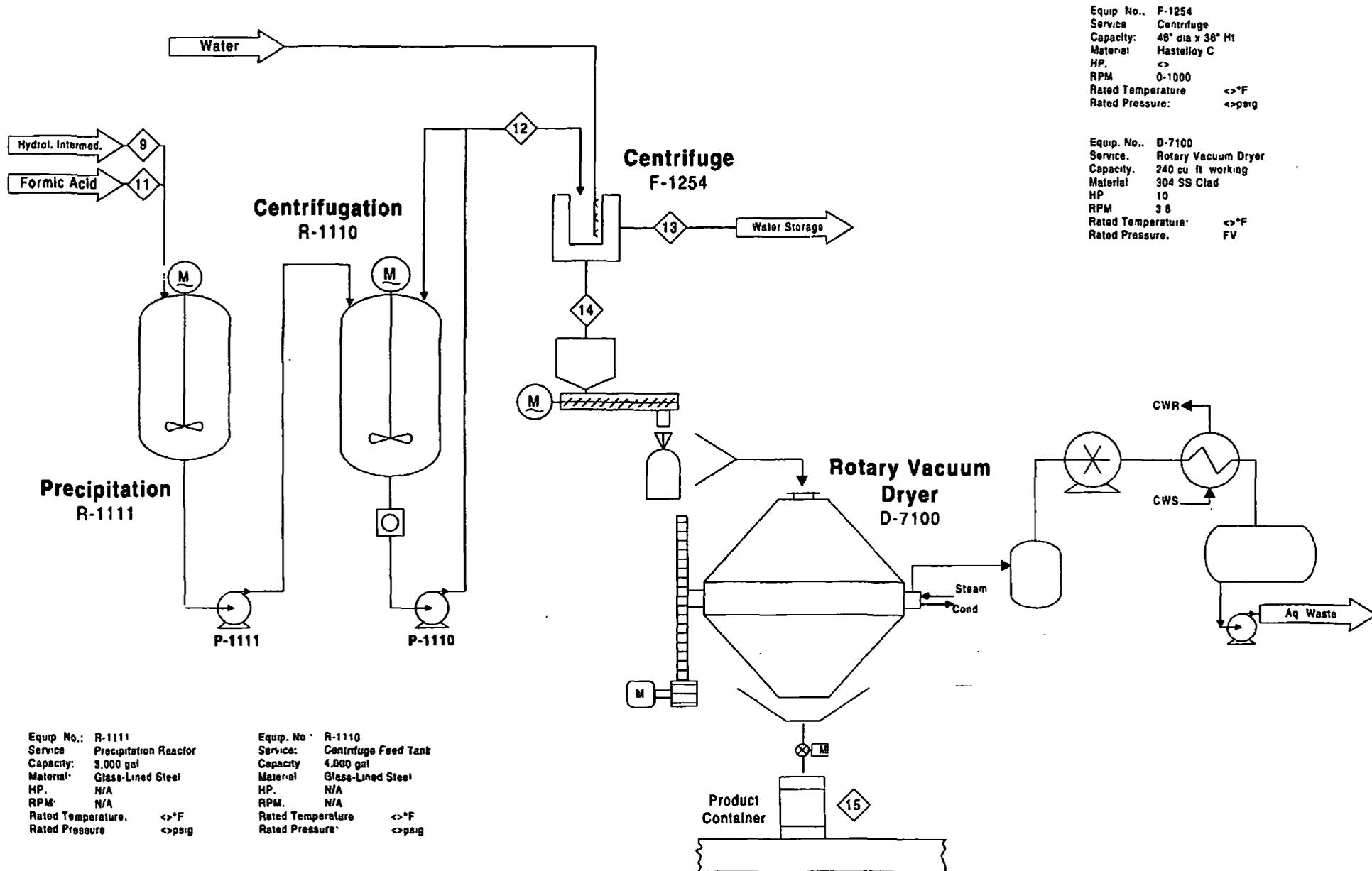
Equip. No.: V-1502 (NEW)
 Service: Coupling Receiver
 Capacity: 350 gal
 Material: 316L SS
 HP: N/A
 RPM: N/A
 Rated Temperature: 400°F
 Rated Pressure: 30 psig & FV

Equip. No.: P-1502 (NEW)
 Service: Coupling Recvr Pump
 Capacity: 30 gpm @ 40' TDH
 Material: 316 SS
 HP: TBD
 RPM: TBD
 Rated Temperature: <>°F
 Rated Pressure: <>psig



Title: Cyclanilide 90946 Process Flow Diagram
 Page 1 of 4 Pages

Drawn: DCG	Scale: None	Date: 03/15/00	Rev: B
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Equip. No.. F-1254
 Service Centrifuge
 Capacity: 48" dia x 36" Ht
 Material Hastelloy C
 HP. <>
 RPM 0-1000
 Rated Temperature <>*F
 Rated Pressure: <>psig

Equip. No.. D-7100
 Service Rotary Vacuum Dryer
 Capacity 240 cu ft working
 Material 304 SS Clad
 HP 10
 RPM 38
 Rated Temperature <>*F
 Rated Pressure FV

Equip. No.: R-1111
 Service Precipitation Reactor
 Capacity: 3,000 gal
 Material: Glass-Lined Steel
 HP. N/A
 RPM: N/A
 Rated Temperature: <>*F
 Rated Pressure <>psig

Equip. No. R-1110
 Service: Centrifuge Feed Tank
 Capacity 4,000 gal
 Material Glass-Lined Steel
 HP. N/A
 RPM. N/A
 Rated Temperature <>*F
 Rated Pressure <>psig

Equip. No P-1111 (NEW)
 Service Precipitation Transfer
 Capacity 150 gpm @ 70' TDH
 Material 316 SS
 HP: TBD
 RPM. TBD
 Rated Temperature 400°F
 Rated Pressure TBD

Equip. No.. P-1110
 Service: Centrd. Feed Pump
 Capacity 150 gpm @ 73' TDH
 Material 316 SS
 HP: TBD
 RPM. TBD
 Rated Temperature 400°F
 Rated Pressure TBD



Title: Cyclanilide 90946 Process Flow Diagram
Page 2 of 4 Pages

Drawn: DCG	Scale: None	Date: 03/15/00	Rev: B
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Aventis: Cyclanilide--Huls Technology Basis--One (1) Centrifuge Option
Heat & Mass Balance

Summary of Results	
Final Product lb/bx:	2,936 lb
Limiting Cycle Time:	55.4 hours
Final Product lb/day:	1,271 lb/day
Final Product MT/day:	0.6 MT/day

Assumptions:

- | | |
|---|--|
| 1. Process overall 80% O.S.T. | 6. All Yield calculations based on DCA |
| 2. 0.5% Material Loss through centrifugation | 7. -- |
| 3. Centrifuge discharge @ 20% LOD | 8. -- |
| 4. Centrifugation Cycle=45 minutes @ 400 lb./plow | 9. -- |
| 5. Dryer discharge at 0.5% LOD | 10. -- |

R-1107

R-1109

R-1111

Stream No.		1	2	3	4	5	6	7	8	9	10	11
Description		Premix Initial Charge	R-7 Charge + Premix	MeOH Strip	O/H Charged Back	Intermed Xferred to R-9	R-9 Water Charge	R-9 Hydr. Intermediate	MeOH Distillat'n	Intermed. Xferred to R-11	Hydrol. Org. Phase to Rec'y	R-11 Acid Charge
Component	MW											
Raw Materials												
CPDM	158.10		2,292.8									
2,4 DCA	162.00	2,292.8	2,292.8									
NaOCH3	54.00		866.7									
MeOH	32.00		2,022.3									
H2O	18.00						11,464.0	11,464.0		11,464.0		
NaOH	40.00							232.3				
Formic Acid	46.03											1,146.4
Xylene	106.17	3,439.2	11,750.8	160.5	160.5	11,750.6		11,750.8			11,750.6	
(By) Products												
Na-CPMPA	310.10					4,339.8						
MeOH	32.00			3,049.4	3,049.4	3,049.4		447.8	447.8			
Na-RPA 90946	296.10							4,040.2		4,040.2		
RPA 90946	274.10											
NaCHO2	68.01											
Others	---											
Stream Weight, lb/batch		5,792.0	19,225.2	3,209.9	3,209.9	19,139.8	11,464.0	27,935.1	447.8	15,504.3	11,750.6	1,146.4
Stream Volume, gal (ft3)		783.8	2,442.3	484.6	385.3	2,703.2	1,376.2	3,457.3	67.9	1,918.8	1,623.3	116.6
Temperature, °F		100.0	136.0	146.3	145.0	145.0	140.0	77.0	212.0	68.0	77.0	77.0
Pressure, psia (torr)		14.7	14.7	(270)	14.7	14.7	14.7	14.7	14.7	14.7	14.7	14.7
Density, g/cc (lb/ft3)		0.87	0.95	0.80	1.00	0.85	1.00	0.97	0.79	0.97	0.87	1.18
Viscosity, cP (CSt)												
Molar Yield (Overall)						96.5%		97.5%				
Reactor Nom. Volume (gal):			3,000.0			3,000.0		4,000.0		3,000.0		
Reactor Filled Percentage:			81%			90%		86%		64%		

Aventis: Cyclanilide-Huls Techn
Heat & Mass Balance

Assumptions:

1. Process overall 80% O.S.T.
2. 0.5% Material Loss through centrifugation
3. Centrifuge discharge @ 20% LOD
4. Centrifugation Cycle=45 minutes @ 400 lb./pl
5. Dryer discharge at 0.5% LOD

		R-1110	CF:F1254	D-7100	Packout	Solvent Recovery		Water Recovery		Waste Streams	
Stream No.		12	13	14	15	16	17	18	19	20	21
Description		Precipit'd Prod't to Centrif.	Wash + ML Disch.	Wet Prod't to Dryer	Dried Final Product	Xylene to Recycle	Recycled Toluene	Water to Recycle	Recycled Water	Organic Waste	Aqueous Waste
Component	MW										
Raw Materials											
CPDM	158.10										
2,4 DCA	162.00										
NaOCH3	54.00										
MeOH	32.00										
H2O	18.00	11,464.0	11,935.3	1,099.6	18.2	1.8		13,034.9	12,736.0	1.8	298.9
NaOH	40.00										
Formic Acid	46.03										
Xylene	106.17					11,750.6	8,345.7			3,405.0	
(By) Products											
Na-CPMPA	310.10										
MeOH	32.00									6,546.7	
Na-RPA 90946	296.10										
RPA 90946	274.10	3,665.2		3,646.9	2,917.5						
NaCHO2	68.01	1,693.8	1,693.8					1,693.8			1,693.8
Others	---					364.7				364.7	
Stream Weight, lb/batch		16,823.0	13,629.1	4,746.5	2,935.8	12,117.1	8,345.7	14,728.6	12,736.0	10,318.1	1,992.7
Stream Volume, gal (ft3)		2,082.0	1,558.2			1,678.4	1,156.0	1,637.2	1,528.9	1,515.6	208.0
Temperature, °F		68.0	68.0	212.0	212.0	68.0	75.0	68.0	68.0	68.0	68.0
Pressure, psia (torr)		14.7	14.7	14.7	14.7	14.7	14.7	14.7	14.7	14.7	14.7
Density, g/cc (lb/ft3)		0.97	1.05			0.87	0.87	1.08	1.00	0.82	1.15
Viscosity, cP (CSt)											
Molar Yield (Overall)		98.0%			{92.2%}						

Reactor Nom. Volume (gal): 4,000.0
 Reactor Filled Percentage: 52%

Aventis: Cyclanilide--Huls Technology Basis--One (1) Centrifuge Option
Cycle Time Analysis

		Step Cycle Time	Vessel Cycle Time	Rate Limiting Time 55.4 hours
Premix Prep (R-1107)	Charge Toluene	0.5	Σ = 2.8	
	Charge 2,4 DCA	1.3 [Drum]		
	Mix/Hold	1.0		
Coupling Reaction (R-1107)	Charge Premix	0.4	Σ = 9.0	
	Draw Vacuum	0.3		
	Heat to 56-59°C	0.8		
	Charge Na Methoxide	3.0		
	Distill MeOH/Toluene Azeotrope	2.0		
	Cool to 60-65°C	1.0		
	Charge Water	0.0		
	Transfer to Hydrolysis Rxtr	1.5		
Hydrolysis Reaction (R-1109)	Charge Water	1.5	Σ = 10.0	
	Heat/Reflux	3.0		
	Distill MeOH	2.5		
	Cool Rxtr <50°C	1.0		
	Sample/NaOH Adjust	0.0		
	Phase Separate / Transfer	2.0		
Precipitation (R-1111)	Cool <25°C	1.0	Σ = 6.0	
	Charge Formic Acid	3.0		
	Mix	0.5		
	Sample/Results	0.5		
	Transfer	0.5		
Centrifugation (R-1110, F-1254)	Centrifuge Batch	<u>55.4</u>	Σ =	55.4 (100 kg plow per 8 hrs)
Drying	Charge 1.5 batches	1.0	Σ = 8.5	
	Dry Batch	6.0		
	Packout	1.5		

Rate Limiting
Time
55.4 hours

Total Batch 91.8 hours
 Time Req'd

Notes:
nn.n indicates calculated value,
 otherwise value is estimated

COST ESTIMATE SUMMARY

DEFECTIVE
MAR 26 2000

PAGE 1 of 3
 DATE: 16-Mar-00

PROJECT: **CYCLANILIDE**

PROJECT ENGINEER: **M. REINSAGER**

REV.

LABOR RATE: **\$35.00**

	QTY	UNIT	UNIT MH	TOTAL MH	LABOR	MATERIAL	TOTAL
1.0 SITE WORK							
DEMOLITION	2	LOT	80.00	160	\$5,600.00	\$1,500.00	\$7,100.00
PAVING		SF					\$0.00
CONCRETE		YD	15.00	0	\$0.00	\$0.00	\$0.00
DRAINAGE		LOT	80.00	0	\$0.00	\$0.00	\$0.00
EARTHWORK		YD	15.00	0	\$0.00	\$0.00	\$0.00
SUBTOTAL				160	\$5,600.00	\$1,500.00	\$7,100.00
2.0 CIVIL							
FOUNDATIONS	10	LOT	40.00	400	\$14,000.00	\$5,000.00	\$19,000.00
STRUCTURAL (GALVANIZED)	25000	WT	0.04	1000	\$35,000.00	\$18,750.00	\$53,750.00
PIPE RACKS	6000	WT	0.08	375	\$13,125.00	\$3,750.00	\$16,875.00
STRUCTURAL PAINTING		FT^2	0.03	0	\$0.00	\$0.00	\$0.00
GRATING	2000	FT^2	0.20	400	\$14,000.00	\$20,000.00	\$34,000.00
SUBTOTAL				2175	\$76,125.00	\$47,600.00	\$123,625.00
3.0 REACTORS (COILED/JACKETED)							
300 GALLON GLASS		EA					\$0.00
500 GALLON GLASS		EA					\$0.00
1000 GALLON GLASS		EA					\$0.00
2000 GALLON GLASS		EA	35.00	0	\$0.00	\$0.00	\$0.00
3000 GALLON GLASS		EA	40.00	0	\$0.00	\$0.00	\$0.00
4000 GALLON GLASS		EA	40.00	0	\$0.00	\$0.00	\$0.00
COLUMN (10FT)	1	EA	120.00	120	\$4,200.00	\$7,000.00	\$11,200.00
COLUMNS (10 FT PACKED)	2	EA	80.00	160	\$5,600.00	\$40,000.00	\$45,600.00
RELOCATED VESSELS		EA	40.00	0	\$0.00	\$0.00	\$0.00
REACTOR SUPPORTS/STEEL	1	EA	110.00	110	\$3,850.00	\$1,500.00	\$5,350.00
REACTOR REPAIR/MODIFICATION		EA	110.00	0	\$0.00	\$0.00	\$0.00
VESSEL INSULATION		SF	0.70	0	\$0.00	\$0.00	\$0.00
SUBTOTAL				390	\$13,850.00	\$48,500.00	\$62,150.00
4.0 VESSELS/TANKS							
VESSEL REPAIRS		EA	25.00	0	\$0.00	\$0.00	\$0.00
HOPPER SS		EA	40.00	0	\$0.00	\$0.00	\$0.00
VESSEL GLASS (2000 GAL)		EA	60.00	0	\$0.00	\$0.00	\$0.00
VESSEL GLASS (6000 GAL)		EA	60.00	0	\$0.00	\$0.00	\$0.00
VESSEL GLASS (8000 GAL)		EA	60.00	0	\$0.00	\$0.00	\$0.00
VESSEL, FURAN (15000 GAL)		EA	60.00	0	\$0.00	\$0.00	\$0.00
VESSEL, FURAN (12000 GAL)		EA	60.00	0	\$0.00	\$0.00	\$0.00
VESSEL, FURAN (6000 GAL)		EA	60.00	0	\$0.00	\$0.00	\$0.00
API, SS (12000 GAL)		EA	60.00	0	\$0.00	\$0.00	\$0.00
API, SS (16000 GAL)		EA	80.00	0	\$0.00	\$0.00	\$0.00
API, SS (1500 GAL)		EA	60.00	0	\$0.00	\$0.00	\$0.00
MOLE SEIVE	1	EA	60.00	60	\$2,100.00	\$8,000.00	\$10,100.00
VESSEL, SS (400 GAL)	4	EA	80.00	320	\$11,200.00	\$28,000.00	\$39,200.00
VESSEL, SS (1500 GAL)		EA	80.00	0	\$0.00	\$0.00	\$0.00
VESSEL, SS (5000 GAL)		EA	80.00	0	\$0.00	\$0.00	\$0.00
VESSEL INSULATION		SF	0.70	0	\$0.00	\$0.00	\$0.00
SUBTOTAL				380	\$13,300.00	\$38,000.00	\$49,300.00

COST ESTIMATE SUMMARY

PROJECT: CYCLANILIDE

DATE: 16-Mar-00

PROJECT ENGINEER: M. REINSAGER

REV.

LABOR RATE: \$35.00

	QTY	UNIT	UNIT MH	TOTAL MH	LABOR	MATERIAL	TOTAL
5.0 HEAT EXCHANGERS							
CARBATE (50 FT^2)		EA	50.00	0	\$0.00	\$0.00	\$0.00
CARBATE, TFE IMP (100 FT^2)		EA	50.00	0	\$0.00	\$0.00	\$0.00
CARBATE (200 FT^2)		EA	60.00	0	\$0.00	\$0.00	\$0.00
CARBATE, TFE IMP. (500 FT^2)		EA	50.00	0	\$0.00	\$0.00	\$0.00
CARBATE (1000 FT^2)		EA	60.00	0	\$0.00	\$0.00	\$0.00
TUBE/SHELL, HAST, (1000 FT^2)		EA	60.00	0	\$0.00	\$0.00	\$0.00
TUBE/SHELL, SS (60 FT^2)		EA	50.00	0	\$0.00	\$0.00	\$0.00
TUBE/SHELL, SS (350 FT^2)	3	EA	60.00	180	\$6,300.00	\$24,000.00	\$30,300.00
TUBE/SHELL, SS (600 FT^2)		EA	50.00	0	\$0.00	\$0.00	\$0.00
COOLING TOWERS		EA	360.00	0	\$0.00	\$0.00	\$0.00
CL2 VAPORIZER		EA	60.00	0	\$0.00	\$0.00	\$0.00
SUBTOTAL				180	\$6,300.00	\$24,000.00	\$30,300.00
6.0 ROTATING EQUIPMENT							
PUMPS (60 GPM)	2	EA	160.00	320	\$11,200.00	\$18,000.00	\$29,200.00
PUMPS (350 GPM)	1	EA	40.00	40	\$1,400.00	\$12,000.00	\$13,400.00
PUMPS (100 GPM), TFE LINED		EA	40.00	0	\$0.00	\$0.00	\$0.00
BLOWER		EA					\$0.00
SCREW CONVEYOR	1	EA	80.00	80	\$2,800.00	\$5,000.00	\$7,800.00
VAC PUMP, AUTO SS		EA	80.00	0	\$0.00	\$0.00	\$0.00
NUTSCHE		EA	120.00	0	\$0.00	\$0.00	\$0.00
AGITATOR - HAST-C		EA	80.00	0	\$0.00	\$0.00	\$0.00
SUBTOTAL				440	\$15,400.00	\$35,000.00	\$50,400.00
7.0 FILTERING EQUIPMENT							
CARTRIDGE FILTER		EA	20.00	0	\$0.00	\$0.00	\$0.00
CARTRIDGE		EA					\$0.00
FUNDA (105 FT^2)		EA	60.00	0	\$0.00	\$0.00	\$0.00
CENTRIFUGE - BASKET (HAST-C)		EA	120.00	0	\$0.00	\$0.00	\$0.00
SUBTOTAL				0	\$0.00	\$0.00	\$0.00
8.0 PIPING							
PIPING (1-2 IN), TFE/CS		LF	1.40	0	\$0.00	\$0.00	\$0.00
PIPING (3-6 IN), TFE/CS		LF	1.70	0	\$0.00	\$0.00	\$0.00
PIPING (8-12 IN), SS		LF	2.70	0	\$0.00	\$0.00	\$0.00
PIPING (.5-.75 IN), SS		LF	0.70	0	\$0.00	\$0.00	\$0.00
PIPING (1-2 IN), SS	900	LF	1.20	1080	\$37,800.00	\$11,700.00	\$49,500.00
PIPING (3-6 IN), SS	120	LF	2.50	300	\$10,500.00	\$2,640.00	\$13,140.00
PIPING (4-6 IN), CS		LF	1.50	0	\$0.00	\$0.00	\$0.00
PIPING (.5-.75 IN), CS	200	LF	0.70	140	\$4,900.00	\$1,200.00	\$6,100.00
PIPING (1-2 IN), CS	100	LF	1.00	100	\$3,500.00	\$700.00	\$4,200.00
		LF	2.00	0	\$0.00	\$0.00	\$0.00
PIPING (2-4 IN), FIBERCAST		LF	2.00	0	\$0.00	\$0.00	\$0.00
VALVES - TFE LINED (3/4-1 IN)		EA		0	\$0.00	\$0.00	\$0.00
VALVES - TFE LINED (1-2 IN)		EA		0	\$0.00	\$0.00	\$0.00
VALVES - TFE LINED (3-6 IN)		EA		0	\$0.00	\$0.00	\$0.00
VALVES - CS (.75 IN)	20	EA		0	\$0.00	\$2,000.00	\$2,000.00
VALVES - CS (1-2 IN)	10	EA		0	\$0.00	\$1,500.00	\$1,500.00
VALVES - CS (3-6 IN)		EA		0	\$0.00	\$0.00	\$0.00
VALVES - SS (3-8 IN)	2	EA		0	\$0.00	\$1,200.00	\$1,200.00
VALVES - EXOTIC		EA		0	\$0.00	\$0.00	\$0.00

COST ESTIMATE SUMMARY

PROJECT: CYCLANILIDE

DATE 16-Mar-00

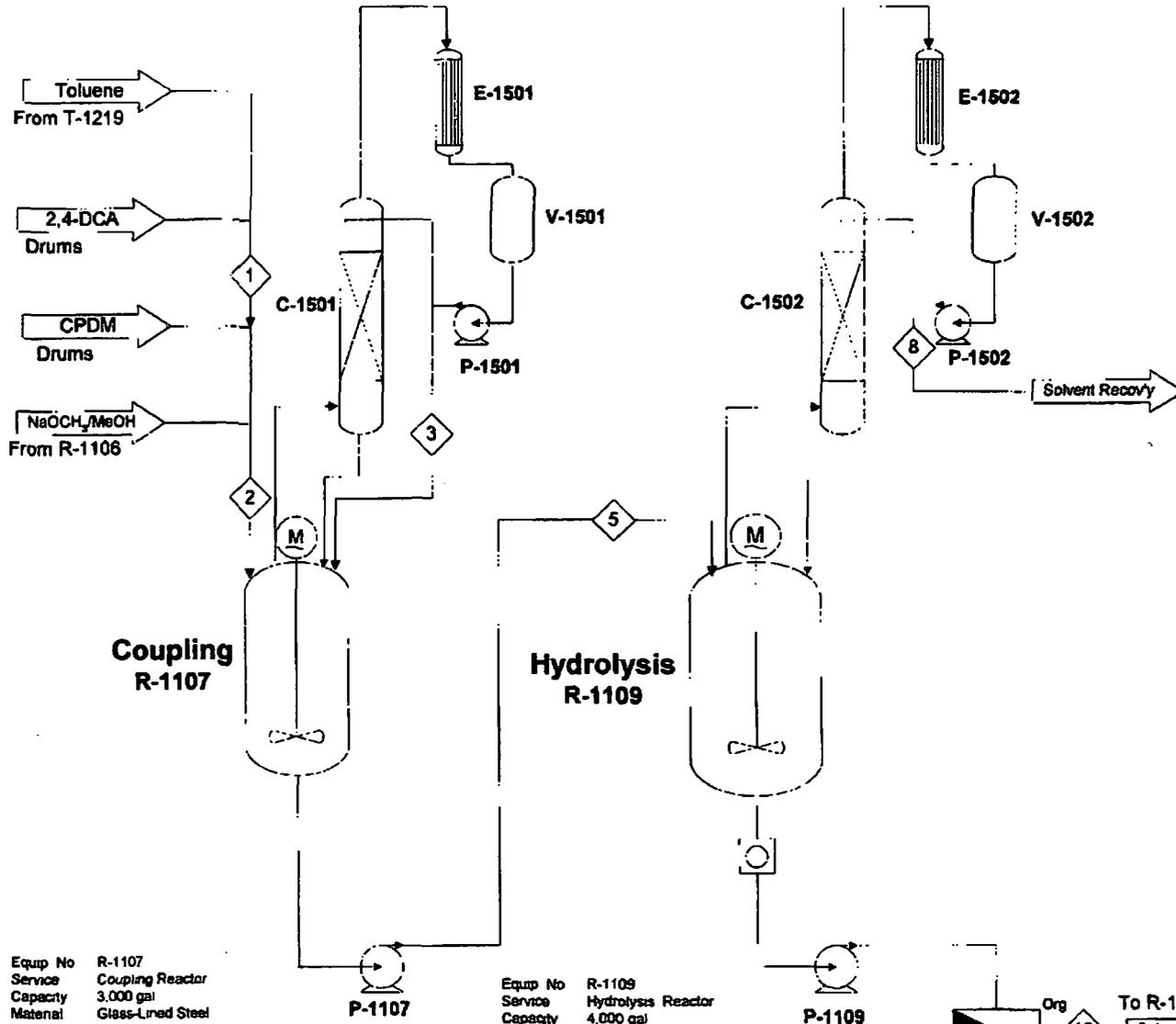
PROJECT ENGINEER M REINSAGER

REV

LABOR RATE \$32.00

	QTY	UNIT	UNIT MH	TOTAL MH	LABOR	MATERIAL	TOTAL
VALVES - SS (1-2 IN)	25	EA		0	\$0.00	\$6,250.00	\$6,250.00
VALVES - SS (4-6 IN)		EA		0	\$0.00	\$0.00	\$0.00
FITTINGS, TFE (1-2 IN)		EA		0	\$0.00	\$0.00	\$0.00
FITTINGS, TFE (3-6 IN)		EA		0	\$0.00	\$0.00	\$0.00
INSULATION (2-4 IN)	100	LF	0.40	40	\$1,400.00	\$1,000.00	\$2,400.00
PAINTING		LF	0.20	0	\$0.00	\$0.00	\$0.00
PSV		EA	5.00	0	\$0.00	\$0.00	\$0.00
RUPTURE DISC		EA	5.00	0	\$0.00	\$0.00	\$0.00
STEAM TRACING/INS	150	LF	0.50	75	\$2,625.00	\$1,200.00	\$3,825.00
PIPING MISC (HANGERS, ETC)	5	LOT	40.00	200	\$7,000.00	\$4,000.00	\$11,000.00
HOT WATER MIXER		LOT	20.00	0	\$0.00	\$0.00	\$0.00
SUBTOTAL				1935	\$67,725.00	\$33,390.00	\$101,115.00
9.0 ELECTRIC/INSTRUMENTATION							
SCALE	1	EA	20.00	20	\$700.00	\$2,500.00	\$3,200.00
MOTOR (20-40 HP)	3	EA	24.00	72	\$2,520.00	\$4,500.00	\$7,020.00
WIRING/CONDUIT/TRAY	500	LF	0.70	350	\$12,250.00	\$6,000.00	\$18,250.00
FLOW INST (MICRO-MOTION)	4	EA	48.00	192	\$6,720.00	\$20,000.00	\$26,720.00
FLOW INSTRUMENTS		EA	10.00	0	\$0.00	\$0.00	\$0.00
PRESSURE INSTRUMENTS/CTRL		EA	50.00	0	\$0.00	\$0.00	\$0.00
LEVEL INSTRUMENTS	4	EA	42.00	168	\$5,880.00	\$6,000.00	\$11,880.00
GUAGES	10	EA	0.80	8	\$280.00	\$750.00	\$1,030.00
TEMP INDICATOR	5	EA	2.00	10	\$350.00	\$1,000.00	\$1,350.00
CONTROL VALVES	4	EA	24.00	96	\$3,360.00	\$8,000.00	\$11,360.00
PRESSURE REGULATORS	2	EA	8.00	16	\$560.00	\$1,000.00	\$1,560.00
CONTROLLERS	4	EA	12.00	48	\$1,680.00	\$3,200.00	\$4,880.00
INTERLOCKS (MINIMAL)	6	EA	10.00	60	\$2,100.00	\$1,800.00	\$3,900.00
DCS EQUIPMENT/CONFIGURATION		EA	120.00	0	\$0.00	\$0.00	\$0.00
CONTROL ROOM/MCC		EA	650.00	0	\$0.00	\$0.00	\$0.00
ELECTRICAL MISC	2	LOT	120.00	240	\$8,400.00	\$4,000.00	\$12,400.00
SWITCHES	6	EA	10.00	60	\$2,100.00	\$1,200.00	\$3,300.00
SUBTOTAL				1340	\$46,900.00	\$59,950.00	\$106,850.00
10.0 INSPECTION/ENGINEERING							
VESSEL INSPECTIONS		EA			\$0.00		\$0.00
ENGINEERING/DCS CONFIG	15	LOT	40.00	600	\$21,000.00		\$21,000.00
DRAFTING/DESIGN	12	LOT	40.00	480	\$16,800.00		\$16,800.00
SUBTOTAL				1080	\$37,800.00	\$0.00	\$37,800.00
11.0 RENTALS							
CRANE	3	LOT				\$4,500.00	\$4,500.00
EQUIPMENT		LOT				\$0.00	\$0.00
FREIGHT (ALL ABOVE)	6	LOT				\$9,000.00	\$9,000.00
12.0 MISCELLANEOUS							
LAB EQUIPMENT		LOT				\$0.00	\$0.00
SUBTOTAL						\$9,000.00	\$9,000.00
SUBTOTAL				8080	\$282,800.00	\$294,840.00	\$577,640.00
OVERTIME (50%)							
CONTINGENCY (40%)					\$113,120.00	\$117,936.00	\$231,056.00
TOTAL:					\$395,920.00	\$412,776.00	\$809,000.00

**Maximum
Productivity
Option**



Equip No	C-1501 (NEW)
Service	Coupling Column
Capacity	24" dia x 10' T/T
Material	316L SS
HP	N/A
RPM	N/A
Rated Temperature	400°F
Rated Pressure	30 psig & FV

Equip No	C-1502 (NEW)
Service	Coupling Column
Capacity	24" dia x 10' T/T
Material	316L SS
HP	N/A
RPM	N/A
Rated Temperature	400°F
Rated Pressure	30 psig & FV

Equip No	E-1501 (NEW)
Service	Coupling Condenser
Capacity	300 sq ft
Material	316LSS tube/CS shell
HP	N/A
RPM	N/A
Rated Temperature	400°F
Rated Pressure	30 psig & FV

Equip No	E-1502 (NEW)
Service	Coupling Condenser
Capacity	300 sq ft
Material	316LSS tube/CS shell
HP	N/A
RPM	N/A
Rated Temperature	400°F
Rated Pressure	30 psig & FV

Equip No	V-1501 (NEW)
Service	Coupling Receiver
Capacity	350 gal
Material	316L SS
HP	N/A
RPM	N/A
Rated Temperature	400°F
Rated Pressure	30 psig & FV

Equip No	V-1502 (NEW)
Service	Coupling Receiver
Capacity	350 gal
Material	316L SS
HP	N/A
RPM	N/A
Rated Temperature	400°F
Rated Pressure	30 psig & FV

Equip No	P-1501 (NEW)
Service	Coupling Recvr Pump
Capacity	30 gpm @ 40' TDH
Material	316 SS
HP	TBD
RPM	TBD
Rated Temperature	<>°F
Rated Pressure	<>psig

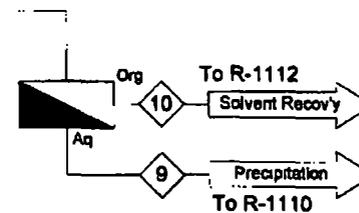
Equip No	P-1502 (NEW)
Service	Coupling Recvr Pump
Capacity	30 gpm @ 40' TDH
Material	316 SS
HP	TBD
RPM	TBD
Rated Temperature	<>°F
Rated Pressure	<>psig

Equip No	R-1107
Service	Coupling Reactor
Capacity	3,000 gal
Material	Glass-Lined Steel
HP	N/A
RPM	N/A
Rated Temperature	<>°F
Rated Pressure	<>psig

Equip No	R-1109
Service	Hydrolysis Reactor
Capacity	4,000 gal
Material	Hastelloy C
HP	N/A
RPM	N/A
Rated Temperature	<>°F
Rated Pressure	<>psig

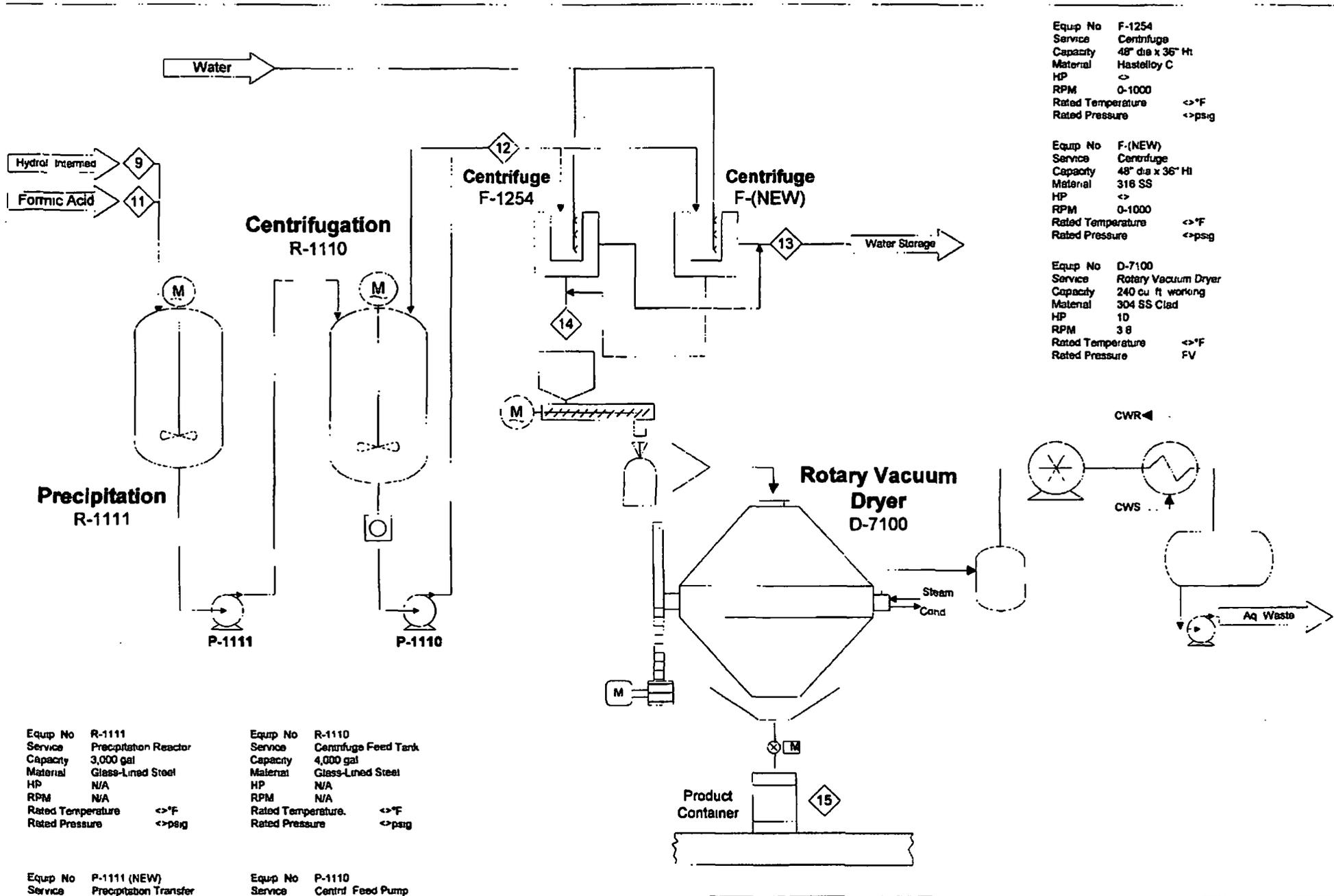
Equip No	P-1107 (NEW)
Service	Coupling Transfer
Capacity	150 gpm @ 70' TDH
Material	316 SS
HP	TBD
RPM	TBD
Rated Temperature	400°F
Rated Pressure	TBD

Equip No	P-1109
Service	Hydrolysis Transfer
Capacity	300 gpm @ 94' TDH
Material	Hastelloy C
HP	<>
RPM	<>
Rated Temperature	<>°F
Rated Pressure	<>psig



Title: Cyclanilide 90946 Process Flow Diagram
Page 1 of 4 Pages

Drawn:	Scale:	Date:	Rev:
DCG	None	03/15/00	B



Equip No F-1254
Service Centrifuge
Capacity 48" dia x 36" Ht
Material Hastelloy C
HP <>
RPM 0-1000
Rated Temperature <>*F
Rated Pressure <>psig

Equip No F-(NEW)
Service Centrifuge
Capacity 48" dia x 36" Ht
Material 316 SS
HP <>
RPM 0-1000
Rated Temperature <>*F
Rated Pressure <>psig

Equip No D-7100
Service Rotary Vacuum Dryer
Capacity 240 cu ft working
Material 304 SS Clad
HP 10
RPM 38
Rated Temperature <>*F
Rated Pressure FV

Equip No R-1111
Service Precipitation Reactor
Capacity 3,000 gal
Material Glass-Lined Steel
HP N/A
RPM N/A
Rated Temperature <>*F
Rated Pressure <>psig

Equip No R-1110
Service Centrifuge Feed Tank
Capacity 4,000 gal
Material Glass-Lined Steel
HP N/A
RPM N/A
Rated Temperature <>*F
Rated Pressure <>psig

Equip No P-1111 (NEW)
Service Precipitation Transfer
Capacity 150 gpm @ 70' TDH
Material 316 SS
HP TBD
RPM TBD
Rated Temperature 400°F
Rated Pressure TBD

Equip No P-1110
Service Centrifuge Feed Pump
Capacity 150 gpm @ 73' TDH
Material 316 SS
HP TBD
RPM TBD
Rated Temperature 400°F
Rated Pressure TBD



Title: Cyclanilide 90946 Process Flow Diagram
Page 2 of 4 Pages

Drawn:
DCG

Scale:
None

Date:
03/15/00

Rev:
B

Aventis: Cyclanilide--Huls Technology Basis--Two (2) Centrifuge Option
Heat & Mass Balance

Summary of Results	
Final Product lb/bx:	2,936 lb
Limiting Cycle Time:	27.7 hours
Final Product lb/day:	2,543 lb/day
Final Product MT/day:	1.2 MT/day

Assumptions:

1. Process overall 80% O.S.T.
2. 0.5% Material Loss through centrifugation
3. Centrifuge discharge @ 20% LOD
4. Centrifugation Cycle=45 minutes @ 400 lb./plow
5. Dryer discharge at 0.5% LOD
6. All Yield calculations based on DCA
7. ---
8. ---
9. ---
10. ---

R-1107

R-1109

R-1111

Stream No.		1	2	3	4	5	6	7	8	9	10	11
Description		Premix Initial Charge	R-7 Charge + Premix	MeOH Strip	O/H Charged Back	Intermed Xferred to R-9	R-9 Water Charge	R-9 Hydr. Intermediate	MeOH Distillat'n	Intermed. Xferred to R-11	Hydrol. Org. Phase to Rec'y	R-11 Acid Charge
Component	MW											
Raw Materials												
CPDM	158.10		2,292.8									
2,4 DCA	162.00	2,292.8	2,292.8									
NaOCH3	54.00		866.7									
MeOH	32.00		2,022.3									
H2O	18.00						11,464.0	11,464.0		11,464.0		
NaOH	40.00							232.3				
Formic Acid	46.03											1,146.4
Xylene	106.17	3,439.2	11,750.6	160.5	160.5	11,750.6		11,750.6			11,750.6	
(By) Products												
Na-CPMPA	310.10					4,339.8						
MeOH	32.00			3,049.4	3,049.4	3,049.4		447.8	447.8			
Na-RPA 90946	296.10							4,040.2		4,040.2		
RPA 90946	274.10											
NaCHO2	68.01											
Others	---											
Stream Weight, lb/batch		5,732.0	19,225.2	3,209.9	3,209.9	19,139.8	11,464.0	27,935.1	447.8	15,504.3	11,750.6	1,146.4
Stream Volume, gal (ft3)		793.8	2,442.3	484.6	385.3	2,703.2	1,376.2	3,457.3	67.9	1,918.8	1,623.3	116.6
Temperature, °F		100.0	136.0	146.3	145.0	145.0	140.0	77.0	212.0	68.0	77.0	77.0
Pressure, psia (torr)		14.7	14.7	(270)	14.7	14.7	14.7	14.7	14.7	14.7	14.7	14.7
Density, g/cc (lb/ft3)		0.87	0.95	0.80	1.00	0.85	1.00	0.97	0.79	0.97	0.87	1.18
Viscosity, cP (cSt)												
Molar Yield (Overall)						96.5%		97.5%				

Reactor Nom. Volume (gal): 3,000.0 3,000.0 4,000.0 3,000.0
 Reactor Filled Percentage: 81% 90% 86% 64%

Aventis: Cyclanilide--Huis Techn
Heat & Mass Balance

Assumptions:

1. Process overall 80% O.S.T.
2. 0.5% Material Loss through centrifugation
3. Centrifuge discharge @ 20% LOD
4. Centrifugation Cycle=45 minutes @ 400 lb./pl
5. Dryer discharge at 0.5% LOD

		R-1110	CF:F1254	D-7100	Packout	Solvent Recovery		Water Recovery		Waste Streams	
Stream No.		12	13	14	15	16	17	18	19	20	21
Description		Precipit'd Prod't to Centrif.	Wash + ML Disch.	Wet Prod't to Dryer	Dried Final Product	Xylene to Recycle	Recycled Toluene	Water to Recycle	Recycled Water	Organic Waste	Aqueous Waste
Component	MW										
Raw Materials											
CPDM	158.10										
2,4 DCA	162.00										
NaOCH3	54.00										
MeOH	32.00										
H2O	18.00	11,464.0	11,935.3	1,099.6	18.2	1.8		13,034.9	12,736.0	1.8	298.9
NaOH	40.00										
Formic Acid	46.03										
Xylene	106.17					11,750.6	8,345.7			3,405.0	
(By) Products											
Na-CPMPA	310.10										
MeOH	32.00									6,546.7	
Na-RPA 90946	296.10										
RPA 90946	274.10	3,665.2		3,646.9	2,917.5						
NaCHO2	68.01	1,693.8	1,693.8					1,693.8			1,693.8
Others	---					364.7				364.7	
Stream Weight, lb/batch		16,823.0	13,629.1	4,746.5	2,935.8	12,117.1	8,345.7	14,728.6	12,736.0	10,318.1	1,992.7
Stream Volume, gal (ft3)		2,082.0	1,558.2			1,678.4	1,156.0	1,637.2	1,528.9	1,515.6	208.0
Temperature, °F		68.0	68.0	212.0	212.0	68.0	75.0	68.0	68.0	68.0	68.0
Pressure, psia (torr)		14.7	14.7	14.7	14.7	14.7	14.7	14.7	14.7	14.7	14.7
Density, g/cc (lb/ft3)		0.97	1.05			0.87	0.87	1.08	1.00	0.82	1.15
Viscosity, cP (CSt)											
Molar Yield (Overall)		98.0%			{92.2%}						

Reactor Nom. Volume (gal): 4,000.0
 Reactor Filled Percentage: 52%

Aventis: Cyclanilide-Huls Technology Basis--Two (2) Centrifuge Option
Cycle Time Analysis

		<u>Step Cycle</u> <u>Time</u>	<u>Vessel Cycle</u> <u>Time</u>	Rate Limiting Time 27.7 hours
Premix Prep (R-1107)	Charge Toluene	<u>0.5</u>	Σ = 2.8	Total Batch 64.1 hours Time Req'd
	Charge 2,4 DCA	<u>1.3</u> [Drum]		
	Mix/Hold	1.0		
Coupling Reaction (R-1107)	Charge Premix	<u>0.4</u>	Σ = 9.0	Notes: nn.n indicates calculated value, otherwise value is estimated
	Draw Vacuum	0.3		
	Heat to 56-59°C	0.8		
	Charge Na Methoxide	3.0		
	Distill MeOH/Toluene Azeotrope	2.0		
	Cool to 60-65°C	1.0		
	Charge Water	0.0		
	Transfer to Hydrolysis Rxtr	1.5		
Hydrolysis Reaction (R-1109)	Charge Water	<u>1.5</u>	Σ = 10.0	
	Heat/Reflux	3.0		
	Distill MeOH	2.5		
	Cool Rxtr <50°C	1.0		
	Sample/NaOH Adjust	0.0		
	Phase Separate / Transfer	2.0		
Precipitation (R-1111)	Cool <25°C	1.0	Σ = 6.0	
	Charge Formic Acid	3.0		
	Mix	0.5		
	Sample/Results	0.5		
	Transfer	0.5		
Centrifugation (R-1110, F-1254)	Centrifuge Batch	<u>27.7</u>	Σ = 27.7 (100 kg plow per 8 hrs)	
Drying	Charge 1.5 batches	1.0	Σ = 8.5	
	Dry Batch	6.0		
	Packout	1.5		

COST ESTIMATE SUMMARY

PROJECT: CYCLANILIDE V3 (CENTRIFUGE)

DATE: 16-Mar-00

PROJECT ENGINEER: M REINSAGER

REV.

LABOR RATE: \$35.00

	QTY	UNIT	UNIT MH	TOTAL MH	LABOR	MATERIAL	TOTAL
1.0 SITE WORK							
DEMOLITION	4	LOT	80.00	320	\$11,200.00	\$3,000.00	\$14,200.00
PAVING		SF					\$0.00
CONCRETE	16	YD	15.00	240	\$8,400.00	\$1,760.00	\$10,160.00
DRAINAGE		LOT	80.00	0	\$0.00	\$0.00	\$0.00
EARTHWORK		YD	15.00	0	\$0.00	\$0.00	\$0.00
SUBTOTAL				560	\$19,600.00	\$4,760.00	\$24,360.00
2.0 CIVIL							
FOUNDATIONS	10	LOT	40.00	400	\$14,000.00	\$5,000.00	\$19,000.00
STRUCTURAL (GALVANIZED)	38000	WT	0.04	1520	\$53,200.00	\$30,400.00	\$83,600.00
PIPE RACKS	6500	WT	0.08	488	\$17,062.50	\$4,875.00	\$21,937.50
STRUCTURAL PAINTING		FT^2	0.03	0	\$0.00	\$0.00	\$0.00
GRATING	1000	FT^2	0.20	200	\$7,000.00	\$10,000.00	\$17,000.00
SUBTOTAL				2608	\$91,262.50	\$50,275.00	\$141,537.50
3.0 REACTORS (COILED/JACKETED)							
300 GALLON GLASS		EA					\$0.00
500 GALLON GLASS		EA					\$0.00
1000 GALLON GLASS		EA					\$0.00
2000 GALLON GLASS		EA	35.00	0	\$0.00	\$0.00	\$0.00
3000 GALLON GLASS		EA	40.00	0	\$0.00	\$0.00	\$0.00
4000 GALLON GLASS		EA	40.00	0	\$0.00	\$0.00	\$0.00
COLUMN (10FT)	1	EA	120.00	120	\$4,200.00	\$7,000.00	\$11,200.00
COLUMNS (10 FT PACKED)	2	EA	80.00	160	\$5,600.00	\$40,000.00	\$45,600.00
RELOCATED VESSELS		EA	40.00	0	\$0.00	\$0.00	\$0.00
REACTOR SUPPORTS/STEEL	1	EA	110.00	110	\$3,850.00	\$1,500.00	\$5,350.00
REACTOR REPAIR/MODIFICATION		EA	110.00	0	\$0.00	\$0.00	\$0.00
VESSEL INSULATION		SF	0.70	0	\$0.00	\$0.00	\$0.00
SUBTOTAL				390	\$13,650.00	\$48,500.00	\$62,150.00
4.0 VESSELS/TANKS							
VESSEL REPAIRS		EA	25.00	0	\$0.00	\$0.00	\$0.00
HOPPER SS		EA	40.00	0	\$0.00	\$0.00	\$0.00
VESSEL GLASS (2000 GAL)		EA	60.00	0	\$0.00	\$0.00	\$0.00
VESSEL GLASS (6000 GAL)		EA	60.00	0	\$0.00	\$0.00	\$0.00
VESSEL GLASS (8000 GAL)		EA	60.00	0	\$0.00	\$0.00	\$0.00
VESSEL, FURAN (15000 GAL)		EA	60.00	0	\$0.00	\$0.00	\$0.00
VESSEL, FURAN (12000 GAL)		EA	60.00	0	\$0.00	\$0.00	\$0.00
VESSEL, FURAN (6000 GAL)		EA	60.00	0	\$0.00	\$0.00	\$0.00
API, SS (12000 GAL)		EA	60.00	0	\$0.00	\$0.00	\$0.00
API, SS (16000 GAL)		EA	80.00	0	\$0.00	\$0.00	\$0.00
API, SS (1500 GAL)		EA	60.00	0	\$0.00	\$0.00	\$0.00
MOLE SEIVE	1	EA	60.00	60	\$2,100.00	\$8,000.00	\$10,100.00
VESSEL, SS (400 GAL)	4	EA	80.00	320	\$11,200.00	\$28,000.00	\$39,200.00
VESSEL, SS (1500 GAL)		EA	80.00	0	\$0.00	\$0.00	\$0.00
VESSEL, SS (5000 GAL)		EA	80.00	0	\$0.00	\$0.00	\$0.00
VESSEL INSULATION		SF	0.70	0	\$0.00	\$0.00	\$0.00
SUBTOTAL				380	\$13,300.00	\$36,000.00	\$49,300.00

GOST ESTIMATE SUMMARY

PROJECT: CYCLANILIDE V3 (CENTRIFUGE)

DATE: 16-Mar-00

PROJECT ENGINEER: M. REINSAGER

REV.

LABOR RATE: \$35.00

	QTY	UNIT	UNIT MH	TOTAL MH	LABOR	MATERIAL	TOTAL
5.0 HEAT EXCHANGERS							
CARBATE (50 FT^2)		EA	50.00	0	\$0.00	\$0.00	\$0.00
CARBATE, TFE IMP. (100 FT^2)		EA	50.00	0	\$0.00	\$0.00	\$0.00
CARBATE (200 FT^2)		EA	50.00	0	\$0.00	\$0.00	\$0.00
CARBATE, TFE IMP. (500 FT^2)		EA	50.00	0	\$0.00	\$0.00	\$0.00
CARBATE (1000 FT^2)		EA	60.00	0	\$0.00	\$0.00	\$0.00
TUBE/SHELL, HAST. (1000 FT^2)		EA	60.00	0	\$0.00	\$0.00	\$0.00
TUBE/SHELL, SS (50 FT^2)		EA	60.00	0	\$0.00	\$0.00	\$0.00
TUBE/SHELL, SS (350 FT^2)	3	EA	60.00	180	\$6,300.00	\$24,000.00	\$30,300.00
TUBE/SHELL, SS (600 FT^2)		EA	60.00	0	\$0.00	\$0.00	\$0.00
COOLING TOWERS		EA	350.00	0	\$0.00	\$0.00	\$0.00
CL2 VAPORIZER		EA	60.00	0	\$0.00	\$0.00	\$0.00
SUBTOTAL				180	\$6,300.00	\$24,000.00	\$30,300.00
6.0 ROTATING EQUIPMENT							
PUMPS (50 GPM)	2	EA	160.00	320	\$11,200.00	\$18,000.00	\$29,200.00
PUMPS (350 GPM)	1	EA	40.00	40	\$1,400.00	\$12,000.00	\$13,400.00
PUMPS (100 GPM), TFE LINED		EA	40.00	0	\$0.00	\$0.00	\$0.00
BLOWER		EA					\$0.00
SCREW CONVEYOR	1	EA	80.00	80	\$2,800.00	\$5,000.00	\$7,800.00
VAC PUMP, AUTO SS		EA	80.00	0	\$0.00	\$0.00	\$0.00
NUTSCHE		EA	120.00	0	\$0.00	\$0.00	\$0.00
CENTRIFUGE (48" SS)		EA	80.00	0	\$0.00	\$0.00	\$0.00
SUBTOTAL				440	\$15,400.00	\$35,000.00	\$50,400.00
7.0 FILTERING EQUIPMENT							
CARTRIDGE FILTER		EA	20.00	0	\$0.00	\$0.00	\$0.00
CARTRIDGE		EA					\$0.00
FUNDA (105 FT^2)		EA	60.00	0	\$0.00	\$0.00	\$0.00
CENTRIFUGE - BASKET (SS)	1	EA	240.00	240	\$8,400.00	\$70,000.00	\$78,400.00
SUBTOTAL				240	\$8,400.00	\$70,000.00	\$78,400.00
8.0 PIPING							
PIPING (1-2 IN), TFE/CS		LF	1.40	0	\$0.00	\$0.00	\$0.00
PIPING (3-6 IN), TFE/CS		LF	1.70	0	\$0.00	\$0.00	\$0.00
PIPING (8-12 IN), SS		LF	2.70	0	\$0.00	\$0.00	\$0.00
PIPING (5-7.5 IN), SS		LF	0.70	0	\$0.00	\$0.00	\$0.00
PIPING (1-2 IN), SS	1300	LF	1.20	1560	\$54,600.00	\$16,900.00	\$71,500.00
PIPING (3-6 IN), SS	300	LF	2.50	750	\$26,250.00	\$8,600.00	\$32,850.00
PIPING (4-6 IN), CS		LF	1.50	0	\$0.00	\$0.00	\$0.00
PIPING (5-7.5 IN), CS	250	LF	0.70	175	\$6,125.00	\$1,500.00	\$7,625.00
PIPING (1-2 IN), CS	100	LF	1.00	100	\$3,500.00	\$700.00	\$4,200.00
		LF	2.00	0	\$0.00	\$0.00	\$0.00
PIPING (2-4 IN), FIBERCAST		LF	2.00	0	\$0.00	\$0.00	\$0.00
VALVES - TFE LINED (3/4-1 IN)		EA		0	\$0.00	\$0.00	\$0.00
VALVES - TFE LINED (1-2 IN)		EA		0	\$0.00	\$0.00	\$0.00
VALVES - TFE LINED (3-6 IN)		EA		0	\$0.00	\$0.00	\$0.00
VALVES - CS (7.5 IN)	20	EA		0	\$0.00	\$2,000.00	\$2,000.00
VALVES - CS (1-2 IN)	10	EA		0	\$0.00	\$1,500.00	\$1,500.00
VALVES - CS (3-6 IN)		EA		0	\$0.00	\$0.00	\$0.00
VALVES - SS (3-6 IN)	4	EA		0	\$0.00	\$2,400.00	\$2,400.00
VALVES - EXOTIC		EA		0	\$0.00	\$0.00	\$0.00

COST ESTIMATE SUMMARY

PAGE 3 of 3

PROJECT: CYCLANILIDE V3 (CENTRIFUGE)

DATE 16-Mar-00

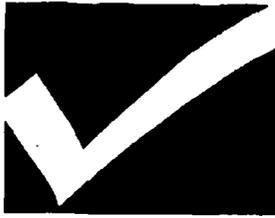
PROJECT ENGINEER M REINSAGER

REV

LABOR RATE \$35 00

	QTY	UNIT	UNIT MH	TOTAL MH	LABOR	MATERIAL	TOTAL
VALVES - SS (1-2 IN)	35	EA		0	\$0 00	\$8,750 00	\$8,750 00
VALVES - SS (4-6 IN)		EA		0	\$0 00	\$0 00	\$0 00
FITTINGS TFE (1-2 IN)		EA		0	\$0 00	\$0 00	\$0 00
FITTINGS TFE (3-6 IN)		EA		0	\$0 00	\$0 00	\$0 00
INSULATION (2-4 IN)	100	LF	0 40	40	\$1,400 00	\$1,000 00	\$2,400 00
PAINTING		LF	0 20	0	\$0 00	\$0 00	\$0 00
PSV		EA	5 00	0	\$0 00	\$0 00	\$0 00
RUPTURE DISC		EA	5 00	0	\$0 00	\$0 00	\$0 00
STEAM TRACING/INS	150	LF	0 50	75	\$2,625 00	\$1,200 00	\$3,825 00
PIPING MISC (HANGERS, ETC)	8	LOT	40 00	320	\$11,200 00	\$6,400 00	\$17,600 00
HOT WATER MIXER		LOT	20 00	0	\$0 00	\$0 00	\$0 00
SUBTOTAL				3020	\$105,700.00	\$48,950.00	\$154,650.00
9.0 ELECTRIC/INSTRUMENTATION							
SCALE	1	EA	20 00	20	\$700 00	\$2,500 00	\$3,200 00
MOTOR (20-40 HP)	4	EA	24 00	96	\$3,360 00	\$6,000 00	\$9,360 00
WIRING/CONDUIT/TRAY	800	LF	0 70	560	\$19,600 00	\$9,600 00	\$29,200 00
FLOW INST (MICRO-MOTION)	4	EA	48 00	192	\$6,720 00	\$20,000 00	\$26,720 00
FLOW INSTRUMENTS		EA	10 00	0	\$0 00	\$0 00	\$0 00
PRESSURE INSTRUMENTS/CTRL		EA	50 00	0	\$0 00	\$0 00	\$0 00
LEVEL INSTRUMENTS	4	EA	42 00	168	\$5,880 00	\$6,000 00	\$11,880 00
GUAGES	16	EA	0 80	13	\$448 00	\$1,200 00	\$1,648 00
TEMP INDICATOR	5	EA	2 00	10	\$350 00	\$1,000 00	\$1,350 00
CONTROL VALVES	8	EA	24 00	192	\$6,720 00	\$16,000 00	\$22,720 00
PRESSURE REGULATORS	2	EA	8 00	16	\$560 00	\$1,000 00	\$1,560 00
CONTROLLERS	4	EA	12 00	48	\$1,680 00	\$3,200 00	\$4,880 00
INTERLOCKS (MINIMAL)	8	EA	10 00	80	\$2,800 00	\$2,400 00	\$5,200 00
CENTRIFUGE CONTROL	1	EA	250 00	250	\$8,750 00	\$15,000 00	\$23,750 00
CONTROL ROOM/MCC		EA	650 00	0	\$0 00	\$0 00	\$0 00
ELECTRICAL MISC	4	LOT	160 00	640	\$22,400 00	\$12,000 00	\$34,400 00
SWITCHES	8	EA	10 00	80	\$2,800 00	\$1,600 00	\$4,400 00
SUBTOTAL				2365	\$82,768.00	\$97,500.00	\$180,268.00
10.0 INSPECTION/ENGINEERING							
VESSEL INSPECTIONS		EA			\$0 00		\$0 00
ENGINEERING/DCS CONFIG	20	LOT	40 00	800	\$28,000 00		\$28,000 00
DRAFTING/DESIGN	20	LOT	40 00	800	\$28,000 00		\$28,000 00
SUBTOTAL				1600	\$56,000.00	\$0.00	\$56,000.00
11.0 RENTALS							
CRANE	3	LOT				\$4,500 00	\$4,500 00
EQUIPMENT		LOT				\$0 00	\$0 00
FREIGHT (ALL ABOVE)	6	LOT				\$9,000 00	\$9,000 00
12.0 MISCELLANEOUS							
LAB EQUIPMENT		LOT				\$0 00	\$0 00
SUBTOTAL						\$9,000.00	\$9,000.00
SUBTOTAL				11782.3	\$412,380.50	\$423,985.00	\$836,365.50
OVERTIME (50%)							
CONTINGENCY (40%)							
					\$164,952.20	\$169,594.00	\$334,546.20

TOTAL: \$577,332.70 \$593,579.00 \$1,171,000.00



Cyclanilide 90946 Project Team Kick-Off Meeting

3/30/00
11:36 AM to 1:06 PM
Main Conference Room

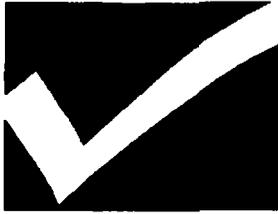
Facilitator: David Guffey

Attendees: S. Herrington, R. Johns, J. Larry, C. Lloyd, S. McCarty, M. Reinsager, D. Roberts, K. Sims, K. Strayhorn, J. Vincent

----- Agenda Topics -----

Project Team Introduction	DG	15
Process Overview	DG	30
Drawings & Equipment List	DG	30
Material Balance & Time Cycle	DG	15

Other Information



Cyclanilide 90946 Project Team Kick-Off Meeting

3/30/00
11:36 AM to 1:06 PM
Main Conference Room

Facilitator:

Attendees:

----- Agenda Topics -----		
Project Team Introduction	DG	15
<u>Discussion:</u>		
<u>Conclusions:</u>		
<u>Action items:</u>	<u>Person responsible:</u>	<u>Deadline:</u>
Process Overview	DG	30
<u>Discussion:</u>		
<u>Conclusions:</u>		
<u>Action items:</u>	<u>Person responsible:</u>	<u>Deadline:</u>

Drawings & Equipment List	DG	30
<u>Discussion:</u>		
<u>Conclusions:</u>		
<u>Action items:</u>	<u>Person responsible:</u>	<u>Deadline:</u>
Material Balance & Time Cycle	DG	15
<u>Discussion:</u>		
<u>Conclusions:</u>		
<u>Action items:</u>	<u>Person responsible:</u>	<u>Deadline:</u>

Other Information

Cyclanilide 90946

Process Description

I. Coupling Reaction

- A. Charge Xylene
- B. Charge 2,4-DCA - *chloracne concerns*
- C. Heat & add CPDM
- D. Draw vacuum & continue heating
- E. Meter Sodium Methoxide into batch while
- F. Distilling off MeOH generated by reaction
- G. Cool batch
- H. Charge water
- I. Transfer to Hydrolysis Reactor

II. Hydrolysis Reaction

- A. Charge remainder of water
- B. Heat
- C. Distill MeOH at atmospheric pressure
- D. Cool
- E. Phase separate AQ Layer contains product (bottom) & is transferred to Precip Reactor—ORG layer goes to solvent recovery

III. Precipitation Reaction

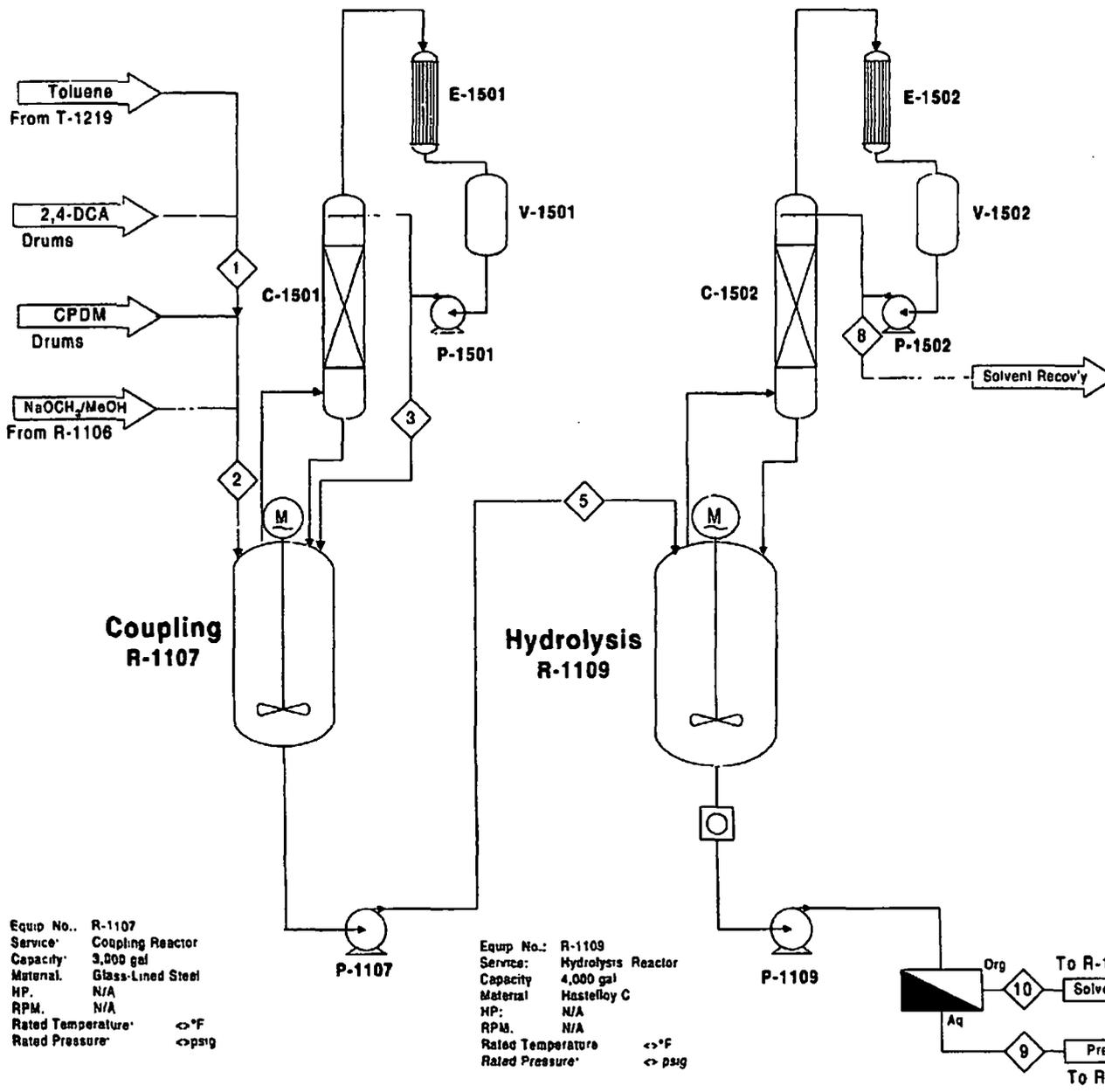
- A. Cool batch
- B. Meter Formic Acid into batch
- C. Wait until pH at specified level
- D. Transfer to Centrifuge Feed Tank

IV. Centrifugation

- A. Batch is centrifuged and loaded into supersacks (or drums) via screw conveyor.
- B. Supersacks (or drums) transferred to Unit 7 Vacuum Dryer.

V. Drying

- A. Supersacks (or drums) loaded into rotary vacuum dryer and dried for ~4-6 hours.



Equip. No C-1501 (NEW)
 Service Coupling Column
 Capacity 24" dia x 10' T/T
 Material 316L SS
 HP N/A
 RPM N/A
 Rated Temperature 400°F
 Rated Pressure 30 psig & FV

Equip. No C-1502 (NEW)
 Service Coupling Column
 Capacity 24" dia x 10' T/T
 Material 316L SS
 HP N/A
 RPM N/A
 Rated Temperature 400°F
 Rated Pressure 30 psig & FV

Equip. No E-1501 (NEW)
 Service Coupling Condenser
 Capacity 300 sq ft
 Material 316LSS tube/CS shell
 HP N/A
 RPM N/A
 Rated Temperature 400°F
 Rated Pressure 30 psig & FV

Equip. No E-1502 (NEW)
 Service Coupling Condenser
 Capacity 300 sq ft
 Material 316LSS tube/CS shell
 HP N/A
 RPM N/A
 Rated Temperature 400°F
 Rated Pressure 30 psig & FV

Equip. No V-1501 (NEW)
 Service Coupling Receiver
 Capacity 350 gal
 Material 316L SS
 HP N/A
 RPM N/A
 Rated Temperature 400°F
 Rated Pressure 30 psig & FV

Equip. No V-1502 (NEW)
 Service Coupling Receiver
 Capacity 350 gal
 Material 316L SS
 HP N/A
 RPM N/A
 Rated Temperature 400°F
 Rated Pressure 30 psig & FV

Equip. No P-1501 (NEW)
 Service Coupling Recvr Pump
 Capacity 30 gpm @ 40' TDH
 Material 316 SS
 HP TBD
 RPM TBD
 Rated Temperature $\lt; \gt^{\circ}\text{F}$
 Rated Pressure $\lt; \gt \text{psig}$

Equip. No P-1502 (NEW)
 Service Coupling Recvr Pump
 Capacity 30 gpm @ 40' TDH
 Material 316 SS
 HP TBD
 RPM TBD
 Rated Temperature $\lt; \gt^{\circ}\text{F}$
 Rated Pressure $\lt; \gt \text{psig}$

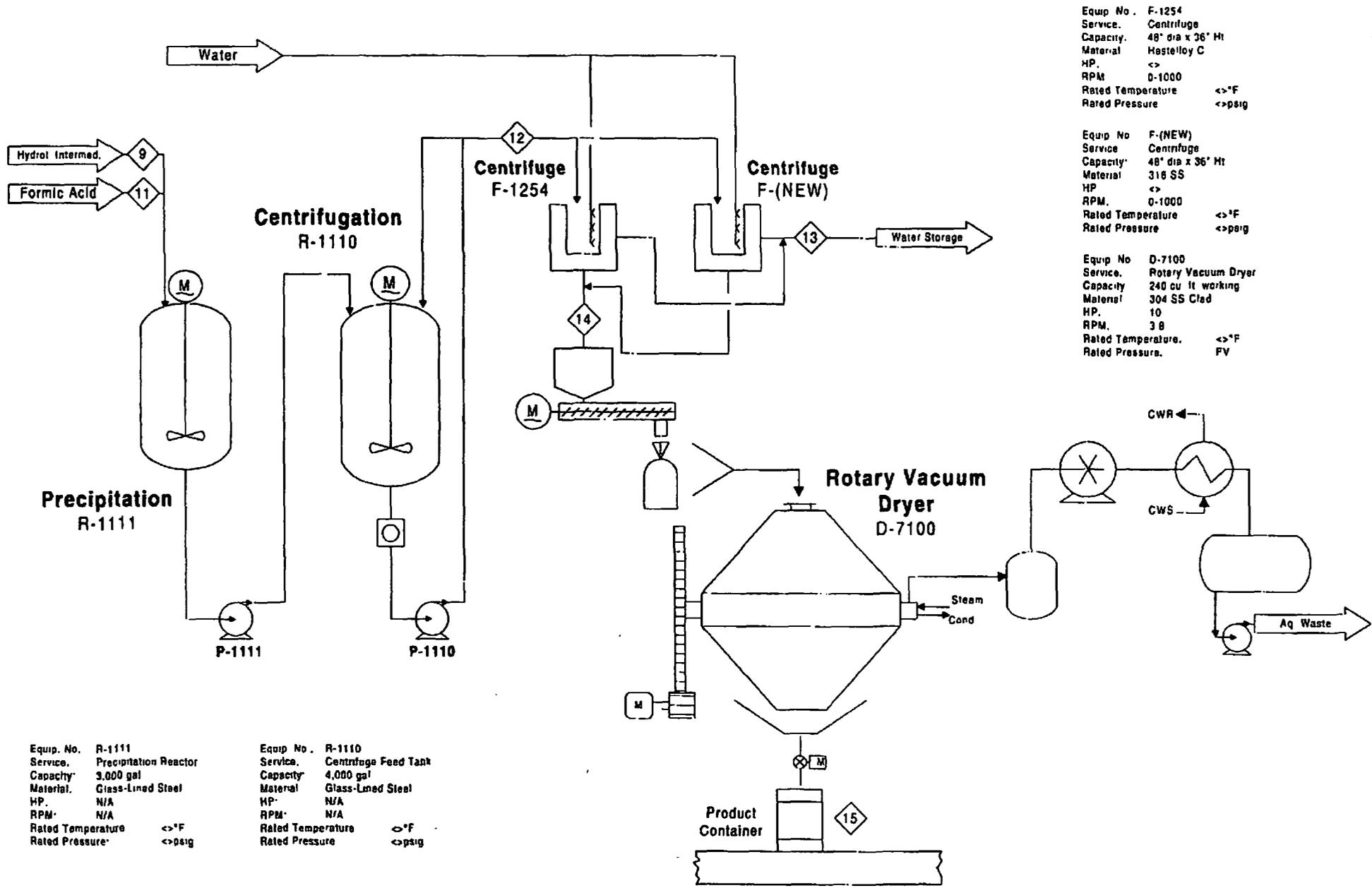
Equip. No. R-1107
 Service Coupling Reactor
 Capacity 3,000 gal
 Material Glass-Lined Steel
 HP N/A
 RPM N/A
 Rated Temperature $\lt; \gt^{\circ}\text{F}$
 Rated Pressure $\lt; \gt \text{psig}$

Equip. No. R-1109
 Service Hydrolysis Reactor
 Capacity 4,000 gal
 Material Hastelloy C
 HP N/A
 RPM N/A
 Rated Temperature $\lt; \gt^{\circ}\text{F}$
 Rated Pressure $\lt; \gt \text{psig}$

Equip. No. P-1107 (NEW)
 Service Coupling Transfer
 Capacity 150 gpm @ 70' TDH
 Material 316 SS
 HP TBD
 RPM TBD
 Rated Temperature 400°F
 Rated Pressure TBD

Equip. No. P-1109
 Service Hydrolysis Transfer
 Capacity 300 gpm @ 94' TDH
 Material Hastelloy C
 HP $\lt; \gt$
 RPM $\lt; \gt$
 Rated Temperature $\lt; \gt^{\circ}\text{F}$
 Rated Pressure $\lt; \gt \text{psig}$

	Title: Cyclanilide 90946 Process Flow Diagram		
	Page 1 of 4 Pages		
Drawn: DCG	Scale: None	Date: 03/15/00	Rev: B



Equip No. F-1254
 Service: Centrifuge
 Capacity: 48" dia x 36" Ht
 Material: Hastelloy C
 HP: <>
 RPM: 0-1000
 Rated Temperature: <>*F
 Rated Pressure: <>psig

Equip No F-(NEW)
 Service: Centrifuge
 Capacity: 48" dia x 36" Ht
 Material: 316 SS
 HP: <>
 RPM: 0-1000
 Rated Temperature: <>*F
 Rated Pressure: <>psig

Equip No D-7100
 Service: Rotary Vacuum Dryer
 Capacity: 240 cu ft working
 Material: 304 SS Clad
 HP: 10
 RPM: 3 B
 Rated Temperature: <>*F
 Rated Pressure: FV

Equip. No. R-1111
 Service: Precipitation Reactor
 Capacity: 3,000 gal
 Material: Glass-Lined Steel
 HP: N/A
 RPM: N/A
 Rated Temperature: <>*F
 Rated Pressure: <>psig

Equip. No. R-1110
 Service: Centrifuge Feed Tank
 Capacity: 4,000 gal
 Material: Glass-Lined Steel
 HP: N/A
 RPM: N/A
 Rated Temperature: <>*F
 Rated Pressure: <>psig

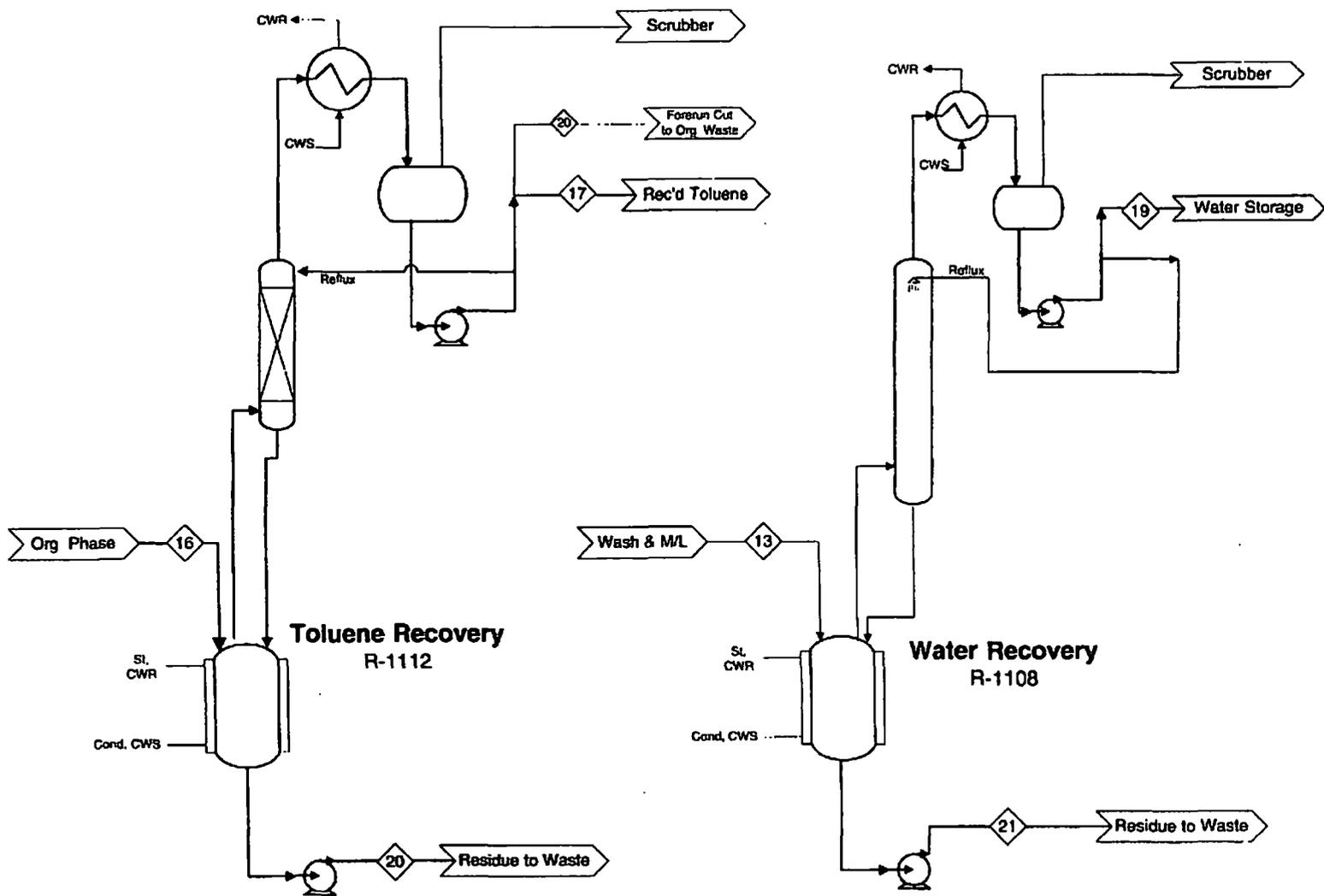
Equip No P-1111 (NEW)
 Service: Precipitation Transfer
 Capacity: 150 gpm @ 70' TDH
 Material: 316 SS
 HP: TBD
 RPM: TBD
 Rated Temperature: 400°F
 Rated Pressure: TBD

Equip. No. P-1110
 Service: Centrif. Feed Pump
 Capacity: 150 gpm @ 73' TDH
 Material: 316 SS
 HP: TBD
 RPM: TBD
 Rated Temperature: 400°F
 Rated Pressure: TBD

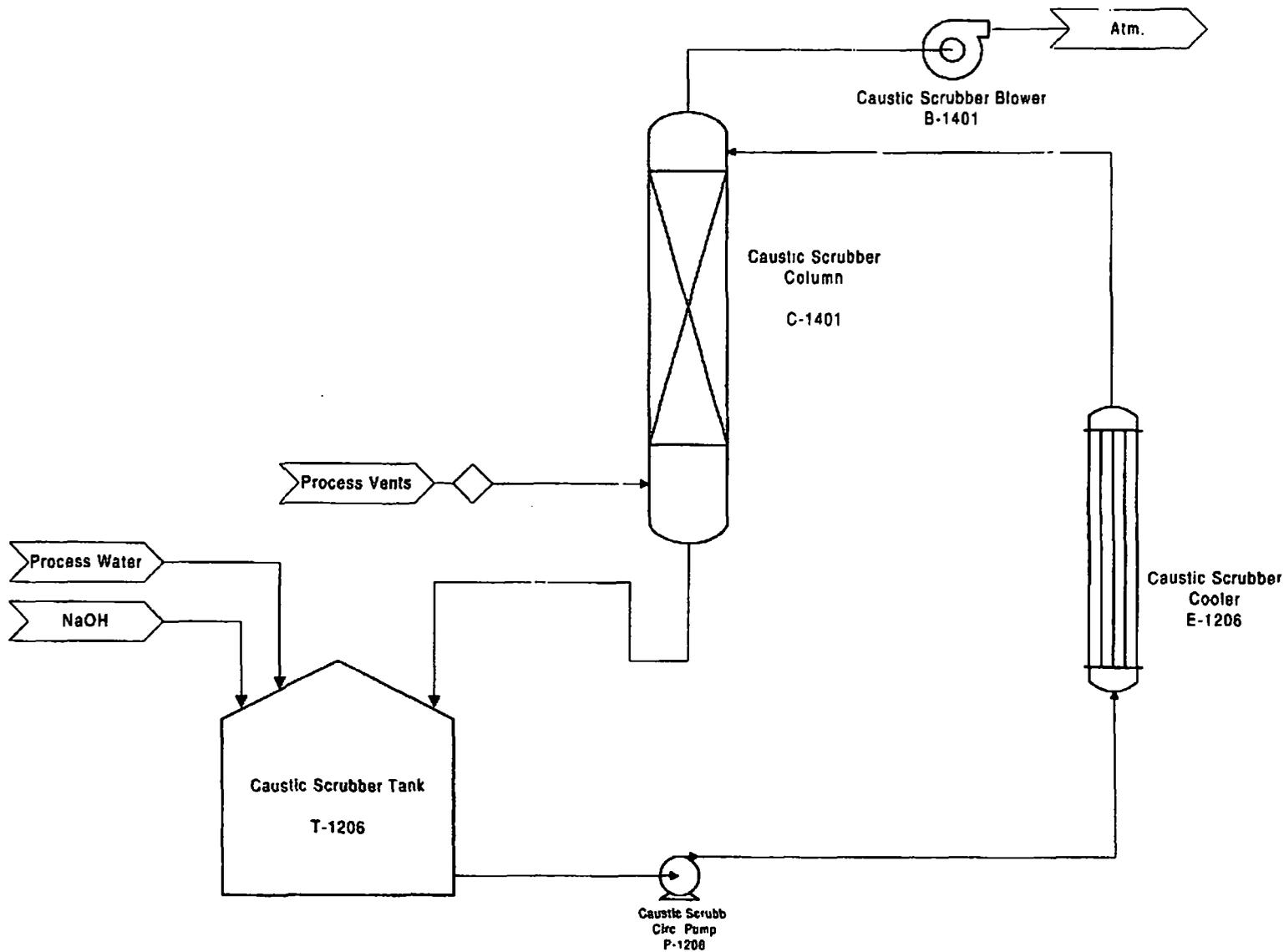


Title: Cyclanilide 90946 Process Flow Diagram
 Page 2 of 4 Pages

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	Title: Cyclanilide 90946 Process Flow Diagram Page 3 of 4 Pages		
	Drawn: DCG	Scale: None	Date: 02/26/00



	Title: Cyclanilide 90946 Process Flow Diagram Page 4 of 4 Pages		
	Drawn: DCG	Scale: None	Date: 02/26/00	Rev: B

Rhone-Poulenc RPA 90946 (Cyclanilide)
Project Equipment List

Revision:	04
Rev. Date:	3/21/00

<u>Service</u>	<u>Equip. No.</u>	<u>Mat'l of Const.</u>	<u>Size/Capacity</u>
<u>Raw Materials</u>			
Toluene Storage Tank	T-1222	316 SS	12900 gal.
Toluene Transfer Pump	P-1222	Alloy D4	75 gpm @ 72'
Sodium Methoxide Storage	T-1219	316 SS	16000 gal.
Sodium Meth. Meter Pump	P-1221	PTFE	400 gph
Formic Acid Storage	T-1221	GLS	1500 gal.
Formic Acid Feed Pump	P-1104B	Alloy D20	50 gpm @ 76'
2.4 DCA	Drums		
CPDM	Drums		
<u>Coupling System</u>			
Reactor	R-1107	GLS	3000 gal
Agitator	A-1107	GLS	20 hp
Column	C- (NEW)	316 SS	2' dia x 10' T/T
Column Packing	PK- (NEW)	316 SS	Wire Gauze
Column Condenser	E- (NEW)	316 SS	300 sq. ft.
Cond. Receiver	T- (NEW)	316 SS	350 gal
Receiver Pump	P- (NEW)	316 SS	30 gpm @ 40'
<u>Hydrolysis System</u>			
Reactor	R-1109	Hast-C	4000 gal
Agitator	A-1109	Hast-C	25 hp
Transfer Pump	P-1109	PFA Lined St.	300 gpm @ 94'
Column	C- (NEW)	316 SS	2' dia x 10' T/T
Column Packing	PK- (NEW)	316 SS	Wire Gauze
Column Condenser	E-1109	Hast-C	1153 sq. ft.
Cond. Receiver	T- (NEW)	316 SS	350 gal
Receiver Pump	P- (NEW)	316 SS	30 gpm @ 40'
<u>Precipitation & Centrifugation</u>			
Reactor	R-1110	GLS	4000 gal
Reactor Agitator	A-1110	GLS	10 hp
Reactor Transfer Pump	P-1110	316 SS	150 gpm @ 73'
Centrifuge Feed Tank			
Centrifuge Feed Tank Agitator			
Centrifuge Feed Pump			
Centrifuge	F-1254	Hast-C	48"x30" P/B
Centrifuge M/L Receiver	V-1304	GLS	750 gal
<u>Vacuum System</u>			
Vacuum Pump	VP-1404	316 SS	300 acfm
Vac. Pump. K/O Pot	V-1404	316 SS	75 gal
<u>Drying System</u>			
Dryer	D-7100	304 SS	7 cu. Meter
Vacuum Pump	VP-7100	CS	154 cfm
Dryer Condenser	E-7105	316 SS / CS	198 sq. ft.
Condensate Receiver	V-7101	316 SS	500 gal
Cond. Rec'vr Transfer Pump	P-7101	316 SS	20 gpm @ 45'
Dryer Discharge Mill	ML- (NEW)	316 SS	4" dia x 100 rpm

Dryer Scrubber Column	C-5403	316 SS	10" D x 25' L
Dryer Scrubb. Blower	B-5403	FRP	200 cfm
Dryer Scrubber Tank	T-5403	FRP	1800 gal
Dryer Scrubber Circ Pump	P-5403	316 SS	30 gpm @ 60'

Process Environmental Controls

Process Scrubber Column	C-1401	CS/FRP	30" x 18' Pkd
Process Scrubber Tank	T-1206	CS	10000 gal
Proc. Scrubb. Circ. Pump	P-1206	316 SS	65 gpm @ 43'
Proc. Scrubb. Circ. Cooler	E-1206	CS / CS	100 sq. ft.

Toluene Recovery

Crude Toluene Storage	R-1114	GLS	3000 gal
Crude Tol. Transf. Pump	P-(NEW)	316 SS	300 gpm @ 60'
Still Pot	R-1112	GLS	2000 gal.
Still Pot Pump	P-(NEW)	316 SS	TBD
Column	C-1412	GLS	2' d x 32' P/H
Primary Condenser	E-1412A	316 SS	141 sq. ft.
Secondary Condenser	E-1412B	316 SS	47 sq. ft.
Receiver	V-1312	316 SS	1000 gal.
Receiver Pump	P-1312	Alloy D4	25 gpm @ 55'
Rcvd Tol Storage Tank	T-1222	316 SS	12900 gal.
Rcvd Tol Storage Pump	P-1222	Alloy D4	75 gpm @ 72'
Conc. Toluene Waste Solution	Wrangler S/S		(solid at amb. conditions)

Water Recovery

Dilute Water Storage	T-1226	FRP	5800 gal
Still Pot	R-1108	GLS	1000 gal
Still Pot Agitator	A-1108	GLS	7.5 hp
Column	C- (NEW)	316 SS	2' x 10' Unpkd
Condenser	E- (NEW)	316 SS / CS	300 sq. ft.
Receiver	V- (NEW)	316 SS	500 gal
Recycle Water Storage	T-1224	FRP	3800 gal
Recy. Water Transf. Pump	P-1224	PFA Lined St	80 gpm @ 80'
Recy. Water Carbon Bed (RENTAL)	F-(NEW)	FRP/GAC	250 gal.
Conc. Salt Waste Solution	Wrangler S/S		(solid at amb. conditions)

Aventis: Cyclanilide--Huls Technology Basis--Two (2) Centrifuge Option
Heat & Mass Balance

Assumptions:

- | | |
|---|--|
| 1. Process overall 80% O.S.T. | 6. All Yield calculations based on DCA |
| 2. 0.5% Material Loss through centrifugation | 7. --- |
| 3. Centrifuge discharge @ 20% LOD | 8. --- |
| 4. Centrifugation Cycle=45 minutes @ 400 lb./plow | 9. --- |
| 5. Dryer discharge at 0.5% LOD | 10. --- |

Summary of Results	
Final Product lb/bx:	2,936 lb
Limiting Cycle Time:	27.7 hours
Final Product lb/day:	2,543 lb/day
Final Product MT/day:	1.2 MT/day

R-1107 R-1109 R-1111

Stream No.		1	2	3	4	5	6	7	8	9	10	11
Description		Premix Initial Charge	R-7 Charge + Premix	MeOH Strip	O/H Charged Back	Intermed Xferred to R-9	R-9 Water Charge	R-9 Hydr. Intermediate	MeOH Distillat'n	Intermed. Xferred to R-11	Hydrol. Org. Phase to Rec'y	R-11 Acid Charge
Component	MW											
Raw Materials												
CPDM	158.10		2,292.8									
2,4 DCA	162.00	2,292.8	2,292.8									
NaOCH3	54.00		866.7									
MeOH	32.00		2,022.3									
H2O	18.00						11,464.0	11,464.0		11,464.0		
NaOH	40.00							232.3				
Formic Acid	46.03											1,146.4
Xylene	106.17	3,439.2	11,750.6	160.5	160.5	11,750.6		11,750.6			11,750.6	
(By) Products												
Na-CPMPA	310.10					4,339.8						
MeOH	32.00			3,049.4	3,049.4	3,049.4		447.8	447.8			
Na-RPA 90946	296.10							4,040.2		4,040.2		
RPA 90946	274.10											
NaCHO2	68.01											
Others	---											
Stream Weight, lb/batch		5,792.0	19,225.2	3,209.9	3,209.9	19,139.8	11,464.0	27,935.1	447.8	15,504.3	11,750.6	1,146.4
Stream Volume, gal (ft3)		793.8	2,442.3	484.6	385.3	2,703.2	1,376.2	3,457.3	67.9	1,918.8	1,623.3	116.6
Temperature, °F		100.0	136.0	146.3	145.0	145.0	140.0	77.0	212.0	68.0	77.0	77.0
Pressure, psia (torr)		14.7	14.7	(270)	14.7	14.7	14.7	14.7	14.7	14.7	14.7	14.7
Density, g/cc (lb/ft3)		0.87	0.95	0.80	1.00	0.85	1.00	0.97	0.79	0.97	0.87	1.18
Viscosity, cP (CSt)												
Molar Yield (Overall)						96.5%		97.5%				

Reactor Nom. Volume (gal):	3,000.0	3,000.0	4,000.0	3,000.0
Reactor Filled Percentage:	81%	90%	86%	64%

Aventis: Cyclanilide-Huls Techn
Heat & Mass Balance

Assumptions:

1. Process overall 80% O.S.T.
2. 0.5% Material Loss through centrifugation
3. Centrifuge discharge @ 20% LOD
4. Centrifugation Cycle=45 minutes @ 400 lb./pl
5. Dryer discharge at 0.5% LOD

Stream No.	Description	R-1110	CF:F1254	D-7100	Packout	Solvent Recovery		Water Recovery		Waste Streams	
		12	13	14	15	16	17	18	19	20	21
		Precipit'd Prod't to Centrif.	Wash + ML Disch.	Wet Prod't to Dryer	Dried Final Product	Xylene to Recycle	Recycled Toluene	Water to Recycle	Recycled Water	Organic Waste	Aqueous Waste
Component	MW										
Raw Materials											
CPDM	158.10										
2,4 DCA	162.00										
NaOCH3	54.00										
MeOH	32.00										
H2O	18.00	11,464.0	11,935.3	1,099.6	18.2	1.8		13,034.9	12,736.0	1.8	298.9
NaOH	40.00										
Formic Acid	46.03										
Xylene	106.17					11,750.6	8,345.7			3% 3,405.0	
(By) Products											
Na-CPMPA	310.10										
MeOH	32.00									63% 6,546.7	
Na-RPA 90946	296.10										
RPA 90946	274.10	3,665.2		3,646.9	2,917.5						
NaCHO2	68.01	1,693.8	1,693.8					1,693.8			1,693.8
Others	---					364.7				39% 364.7	
Stream Weight, lb/batch		16,823.0	13,629.1	4,746.5	2,935.8	12,117.1	8,345.7	14,728.6	12,736.0	10,318.1	1,992.7
Stream Volume, gal (ft3)		2,082.0	1,558.2			1,678.4	1,156.0	1,637.2	1,528.9	1,515.6	208.0
Temperature, °F		68.0	68.0	212.0	212.0	68.0	75.0	68.0	68.0	68.0	68.0
Pressure, psia (torr)		14.7	14.7	14.7	14.7	14.7	14.7	14.7	14.7	14.7	14.7
Density, g/cc (lb/ft3)		0.97	1.05			0.87	0.87	1.08	1.00	0.82	1.15
Viscosity, cP (CSt)											
Molar Yield (Overall)		98.0%			{92.2%}						

Reactor Nom. Volume (gal): 4,000.0
 Reactor Filled Percentage: 52%

Aventis: Cyclanilide—Huls Technology Basis—Two (2) Centrifuge Option
Cycle Time Analysis

		<u>Step Cycle</u> <u>Time</u>	<u>Vessel Cycle</u> <u>Time</u>	Rate Limiting Time 27.7 hours
Premix Prep (R-1107)	Charge Toluene	<u>0.5</u>	Σ = 2.8	
	Charge 2,4 DCA	<u>1.3</u> [Drum]		
	Mix/Hold	<u>1.0</u>		
Coupling Reaction (R-1107)	Charge Premix	<u>0.4</u>	Σ = 9.0	
	Draw Vacuum	<u>0.3</u>		
	Heat to 56-59°C	<u>0.8</u>		
	Charge Na Methoxide	<u>3.0</u>		
	Distill MeOH/Toluene Azeotrope	<u>2.0</u>		
	Cool to 60-65°C	<u>1.0</u>		
	Charge Water	<u>0.0</u>		
	Transfer to Hydrolysis Rxtr	<u>1.5</u>		
Hydrolysis Reaction (R-1109)	Charge Water	<u>1.5</u>	Σ = 10.0	
	Heat/Reflux	<u>3.0</u>		
	Distill MeOH	<u>2.5</u>		
	Cool Rxtr <50°C	<u>1.0</u>		
	Sample/NaOH Adjust	<u>0.0</u>		
	Phase Separate / Transfer	<u>2.0</u>		
Precipitation (R-1111)	Cool <25°C	<u>1.0</u>	Σ = 6.0	
	Charge Formic Acid	<u>3.0</u>		
	Mix	<u>0.5</u>		
	Sample/Results	<u>0.5</u>		
	Transfer	<u>0.5</u>		
Centrifugation (R-1110, F-1254)	Centrifuge Batch	<u>27.7</u>	Σ = 27.7 (100 kg plow per 8 hrs)	
Drying	Charge 1.5 batches	<u>1.0</u>	Σ = 8.5	
	Dry Batch	<u>6.0</u>		
	Packout	<u>1.5</u>		

Rate Limiting
Time
27.7 hours

Total Batch 64.1 hours
 Time Req'd

Notes:

nn.n indicates calculated value,
 otherwise value is estimated

Aventis: Cyclanilide-Huls Technology Basis-One (1) Centrifuge Option
Heat & Mass Balance

Summary of Results	
Final Product lb/bx:	2,936 lb
Limiting Cycle Time:	55.4 hours
Final Product lb/day:	1,271 lb/day
Final Product MT/day:	0.6 MT/day

Assumptions:

- | | |
|---|--|
| 1. Process overall 80% O.S.T. | 6. All Yield calculations based on DCA |
| 2. 0.5% Material Loss through centrifugation | 7. --- |
| 3. Centrifuge discharge @ 20% LOD | 8. --- |
| 4. Centrifugation Cycle=45 minutes @ 400 lb./plow | 9. --- |
| 5. Dryer discharge at 0.5% LOD | 10. --- |

R-1107

R-1109

R-1111

Stream No.		1	2	3	4	5	6	7	8	9	10	11
Description		Premix Initial Charge	R-7 Charge + Premix	MeOH Strip	O/H Charged Back	Intermed Xferred to R-9	R-9 Water Charge	R-9 Hydr. Intermediate	MeOH Distillat'n	Intermed. Xferred to R-11	Hydrol. Org. Phase to Rec'y	R-11 Acid Charge
Component	MW											
Raw Materials												
CPDM	158.10		2,292.8									
2,4 DCA	162.00	2,292.8	2,292.8									
NaOCH3	54.00		866.7									
MeOH	32.00		2,022.3									
H2O	18.00						11,464.0	11,464.0		11,464.0		
NaOH	40.00							232.3				
Formic Acid	46.03											1,146.4
Xylene	106.17	3,439.2	11,750.6	160.5	160.5	11,750.6		11,750.6			11,750.6	
(By) Products												
Na-CPMPA	310.10					4,339.8						
MeOH	32.00			3,049.4	3,049.4	3,049.4		447.8	447.8			
Na-RPA 90946	296.10							4,040.2		4,040.2		
RPA 90946	274.10											
NaCHO2	68.01											
Others	---											
Stream Weight, lb/batch		5,732.0	19,225.2	3,209.9	3,209.9	19,139.8	11,464.0	27,935.1	447.8	15,504.3	11,750.6	1,146.4
Stream Volume, gal (ft3)		793.8	2,442.3	484.6	385.3	2,703.2	1,376.2	3,457.3	67.9	1,918.8	1,623.3	116.6
Temperature, °F		100.0	136.0	146.3	145.0	145.0	140.0	77.0	212.0	68.0	77.0	77.0
Pressure, psia (torr)		14.7	14.7	(270)	14.7	14.7	14.7	14.7	14.7	14.7	14.7	14.7
Density, g/cc (lb/ft3)		0.87	0.95	0.80	1.00	0.85	1.00	0.97	0.79	0.97	0.87	1.18
Viscosity, cP (cSt)												
Molar Yield (Overall)						96.5%		97.5%				

Reactor Nom. Volume (gal):	3,000.0	3,000.0	4,000.0	3,000.0
Reactor Filled Percentage:	81%	90%	86%	64%

Aventis: Cyclanilide-Huls Techn
Heat & Mass Balance

Assumptions:

1. Process overall 80% O.S.T.
2. 0.5% Material Loss through centrifugation
3. Centrifuge discharge @ 20% LOD
4. Centrifugation Cycle=45 minutes @ 400 lb./pl
5. Dryer discharge at 0.5% LOD

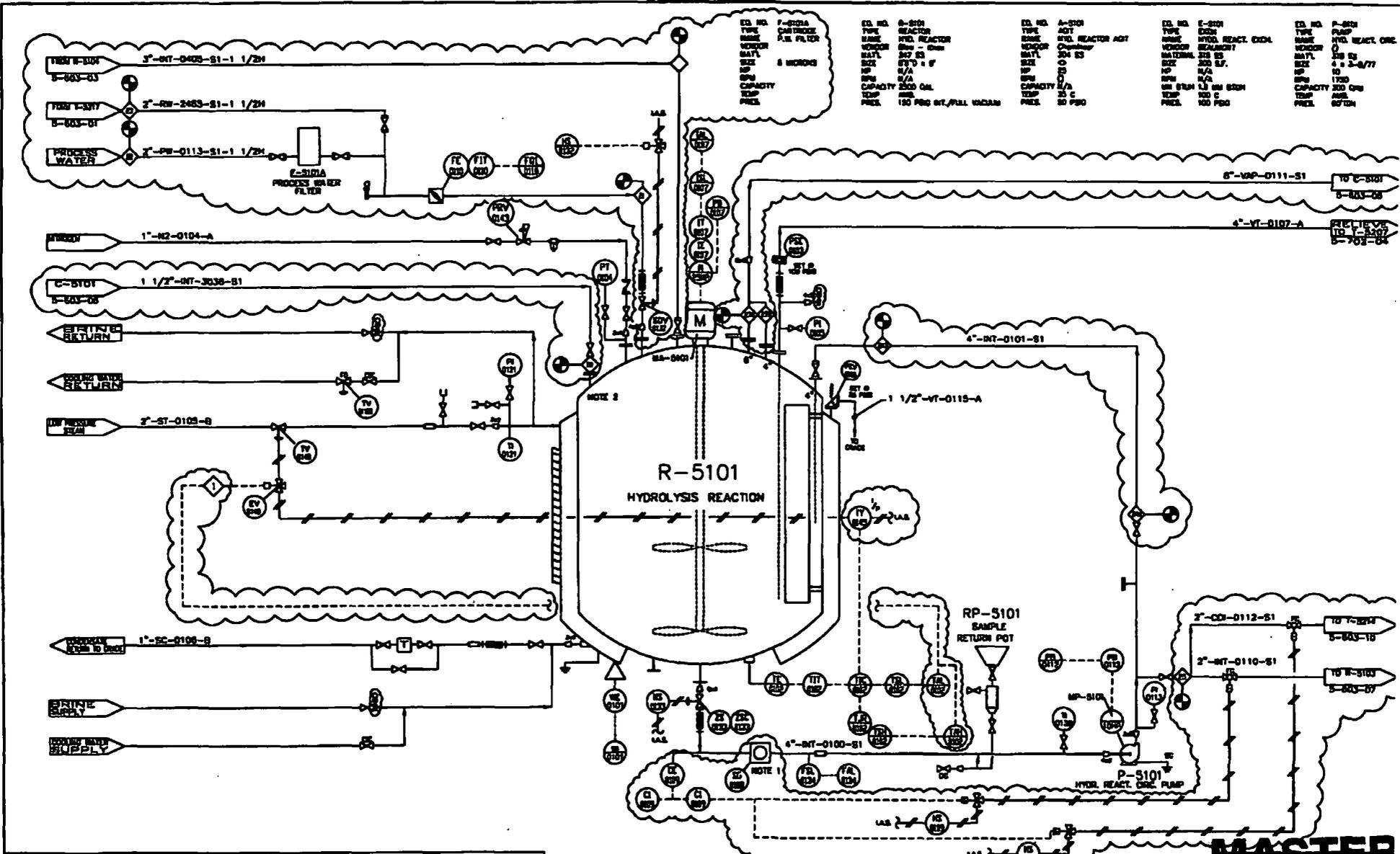
		R-1110	CF:F1254	D-7100	Packout	Solvent Recovery		Water Recovery		Waste Streams	
Stream No.		12	13	14	15	16	17	18	19	20	21
Description		Precipit'd Prod't to Centrif.	Wash + ML Disch.	Wet Prod't to Dryer	Dried Final Product	Xylene to Recycle	Recycled Toluene	Water to Recycle	Recycled Water	Organic Waste	Aqueous Waste
Component	MW										
Raw Materials											
CPDM	158.10										
2,4 DCA	162.00										
NaOCH3	54.00										
MeOH	32.00										
H2O	18.00	11,464.0	11,935.3	1,099.6	18.2	1.8		13,034.9	12,736.0	1.8	298.9
NaOH	40.00										
Formic Acid	46.03										
Xylene	106.17					11,750.6	10,982.5			768.1	
(By) Products											
Na-CPMPA	310.10										
MeOH	32.00									6,546.7	
Na-RPA 90946	296.10										
RPA 90946	274.10	3,665.2		3,646.9	2,917.5						
NaCHO2	68.01	1,693.8	1,693.8					1,693.8			1,693.8
Others	---					364.7				364.7	
Stream Weight, lb/batch		16,823.0	13,629.1	4,746.5	2,935.8	12,117.1	10,982.5	14,728.6	12,736.0	7,681.3	1,992.7
Stream Volume, gal (ft3)		2,082.0	1,558.2			1,678.4	1,521.2	1,637.2	1,528.9	1,153.6	208.0
Temperature, °F		68.0	68.0	212.0	212.0	68.0	75.0	68.0	68.0	68.0	68.0
Pressure, psia (torr)		14.7	14.7	14.7	14.7	14.7	14.7	14.7	14.7	14.7	14.7
Density, g/cc (lb/ft3)		0.97	1.05			0.87	0.87	1.08	1.00	0.80	1.15
Viscosity, cP (cSt)											
Molar Yield (Overall)		98.0%			{92.2%}						

Reactor Nom. Volume (gal): 4,000.0
 Reactor Filled Percentage: 52%

Aventis: Cyclanllide—Huls Technology Basis—One (1) Centrifuge Option

Cycle Time Analysis

		Step Cycle Time	Vessel Cycle Time	Rate Limiting Time 55.4 hours
Premix Prep (R-1107)	Charge Toluene	<u>0.5</u>	Σ = 2.8	Total Batch Time Req'd 91.8 hours
	Charge 2,4 DCA	<u>1.3</u> [Drum]		
	Mix/Hold	1.0		
Coupling Reaction (R-1107)	Charge Premix	<u>0.4</u>	Σ = 9.0	Notes: <u>n.n</u> indicates calculated value, otherwise value is estimated
	Draw Vacuum	0.3		
	Heat to 56-59°C	0.8		
	Charge Na Methoxide	3.0		
	Distill MeOH/Toluene Azeotrope	2.0		
	Cool to 60-65°C	1.0		
	Charge Water	0.0		
Transfer to Hydrolysis Rxtr	1.5			
Hydrolysis Reaction (R-1109)	Charge Water	<u>1.5</u>	Σ = 10.0	
	Heat/Reflux	3.0		
	Distill MeOH	2.5		
	Cool Rxtr <50°C	1.0		
	Sample/NaOH Adjust	0.0		
	Phase Separate / Transfer	2.0		
Precipitation (R-1111)	Cool <25°C	1.0	Σ = 6.0	
	Charge Formic Acid	3.0		
	Mix	0.5		
	Sample/Results	0.5		
	Transfer	0.5		
Centrifugation (R-1110, F-1254)	Centrifuge Batch	<u>55.4</u>	Σ = 55.4 (300 kg plow per 8 hrs)	
Drying	Charge 1.5 batches	1.0	Σ = 8.5	
	Dry Batch	6.0		
	Packout	1.5		



ID. NO.	DESCRIPTION	TYPE	SIZE	DATE	BY
7-5101A	CARBON				
8-5101	HYD. REACTOR				
9-5101	HYD. REACTOR AGT				
10-5101	HYD. REACT. COIL				

NOTE 1: INSTALL IN VERTICAL
 NOTE 2: SPARK RING REMOVED

INTERLOCK LOGIC
 1. TV-0148 SHUTS ON HIGH TEMP

NO.	REVISIONS	DATE	BY	CHKD

NO.	DATE	BY	CHKD

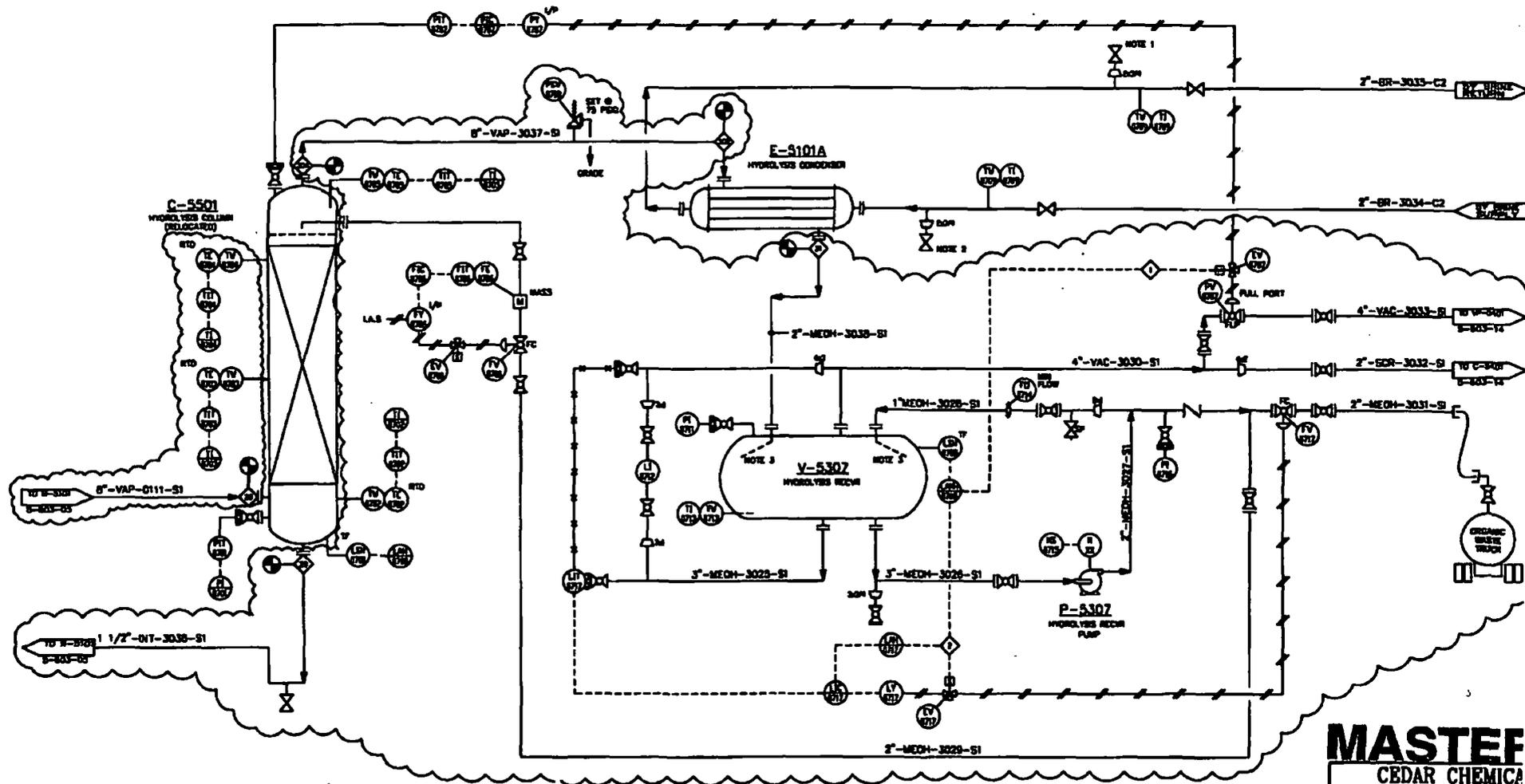
MASTER
 CORPORATION
 UNIT FIVE
 AVENTS CYCLAMLIDE
 PIPING & INSTRUMENTATION ON
 HYDROLYSIS REACTOR
 TAGS: NONE
 UNIT: 5-803-05

EQ. NO. C-5501
 TYPE HYDROLYSIS COLUMN
 NAME VERTICAL
 VENDOR
 MATL
 SIZE
 HP
 RPM
 CAPACITY
 TEMP
 PRES.

EQ. NO. E-5101A
 TYPE HYDROLYSIS CONDENSER
 NAME
 VENDOR
 MATL
 SIZE
 HP
 RPM
 CAPACITY
 TEMP
 PRES.

EQ. NO. V-5307
 TYPE HYDROLYSIS RECVR
 NAME VERTICAL
 VENDOR
 MATL 316 SS
 SIZE
 HP
 RPM 600
 CAPACITY 300
 TEMP
 PRES. 25 PSIG/VV

EQ. NO. P-5307
 TYPE HYDROLYSIS RECVR PUMP
 NAME CENTRIFUGAL
 VENDOR CHESTERTON
 MATL 316 SS
 SIZE 3x1 1/2x10
 HP 7 1/2
 RPM 1750
 CAPACITY 50 GPM
 TEMP
 PRES. 100 FT



- NOTES:
1. LOCATE AT HIGH POINT DISCHARGING VERTICALLY UP
 2. LOCATE AT LOW POINT DISCHARGING VERTICALLY DOWN
 3. INSTALL 45° SPLASH LED DIRECTING FLOW AGAINST VESSEL WALL

- INTERLOCK LOGIC:
1. FV-0708 CLOSES ON HIGH LEVEL
 2. FV-0717 OPENS ON HIGH LEVEL

NO.	REVISIONS	DATE	BY	CHKD	APP'D
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FOR APPROVAL AND THE AUTHORITY OF CONTRACTOR USE THE PROPERTY OF CEDAR CHEMICAL CORPORATION

NO.	DATE	BY	CHKD	APP'D
1	8/20/00	STW		
2	8/28/00	STW		
3	8/28/00	STW		
4	8/28/00	STW		
5	8/28/00	STW		

CONTROL REVISIONS: 8/20/00 STW
 FOR DESIGNING: 8/28/00 STW

SCALE: NONE
 UNIT FIVE
 AVANTIS CYCLANILIDE
 PIPING & INSTRUMENTATION OF
 HYDROLYSIS DISTILLATION
 5-803-08

MASTEF
 CEDAR CHEMICAL CORPORATION
 WEST HOLDS, MISSOURI
 UNIT FIVE
 AVANTIS CYCLANILIDE
 PIPING & INSTRUMENTATION OF
 HYDROLYSIS DISTILLATION
 SCALE: NONE
 5-803-08

EQ. NO. P-5103B
 TYPE DISFRAGM PUMP
 NAME F.A. PUMP
 VENDOR WILCOX
 MATL. O
 SIZE O
 HP O
 RPM O
 CAPACITY O
 TEMP O
 PRES. O

EQ. NO. R-5103
 TYPE REACTOR
 NAME PRECIPITATION
 VENDOR O
 MATL. QLS
 SIZE 6'0" x 6'
 HP N/A
 RPM N/A
 CAPACITY 3000 GAL
 TEMP 60 C
 PRES. ATM

EQ. NO. A-5103
 TYPE AGT
 NAME PRECIPITATION
 VENDOR O
 MATL. 316 SS
 SIZE O
 HP O
 RPM O
 CAPACITY N/A
 TEMP 60 C
 PRES. ATM

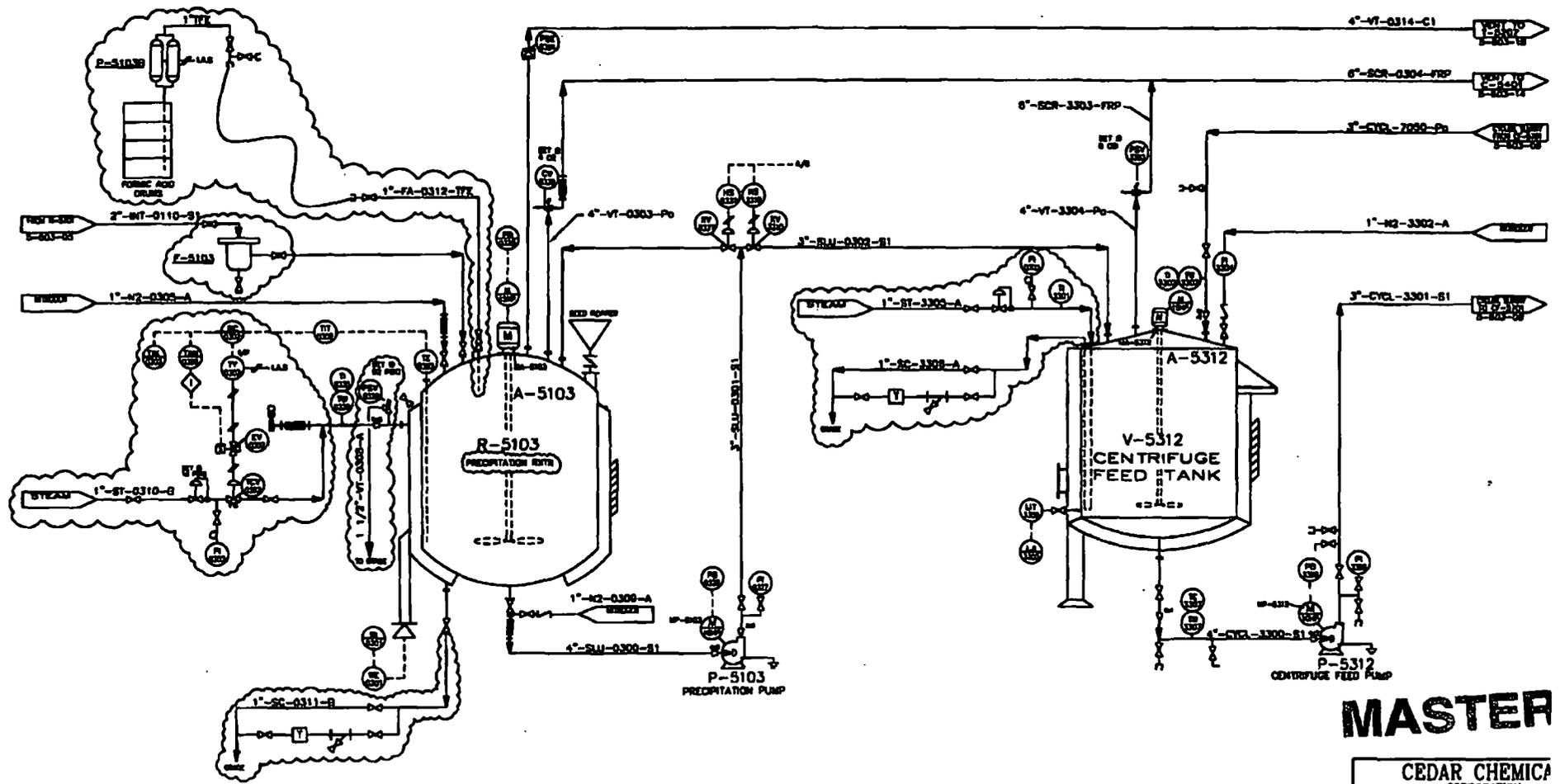
EQ. NO. P-5103
 TYPE SLURRY PUMP
 NAME PRECIPITATION PUMP
 VENDOR DURCO
 MATL. 316 SS
 SIZE 2 x 2R-10/70
 HP 10
 RPM 1750
 CAPACITY 200 GPM
 TEMP 10 C
 PRES. 65' TDM

EQ. NO. F-5103
 TYPE BAG FILTER
 NAME FILTER
 VENDOR O
 MATL. 316 SS
 SIZE 200 MICRON
 HP N/A
 RPM N/A
 CAPACITY O
 TEMP O
 PRES. O

EQ. NO. V-5312
 TYPE TANK
 NAME CENTRIFUGE FEED TANK
 VENDOR O
 MATL. SS
 SIZE 9'0" x 6'-3"
 HP N/A
 RPM N/A
 CAPACITY 5000 GAL
 TEMP 10 C
 PRES. ATM

EQ. NO. P-5312
 TYPE PUMP
 NAME CENTRIFUGE FEED PUMP
 VENDOR DURCO
 MATL. 316 SS
 SIZE 2 x 2R-10/90
 HP 10
 RPM 1750
 CAPACITY 200 GPM
 TEMP 10 C
 PRES. 60' TDM

EQ. NO. A-5312
 TYPE AGT
 NAME CENTR. TANK
 VENDOR O
 MATL. 316 SS
 SIZE O
 HP O
 RPM O
 CAPACITY N/A
 TEMP 10 C
 PRES. ATM



MASTER

CEDAR CHEMICAL CORPORATION
 WEST WELLS, ARIZONA

UNIT FIVE

AVENTIS CYCLANILIDE
 PIPING & INSTRUMENTATION BY
 PRECIPITATION & CF FEED T.

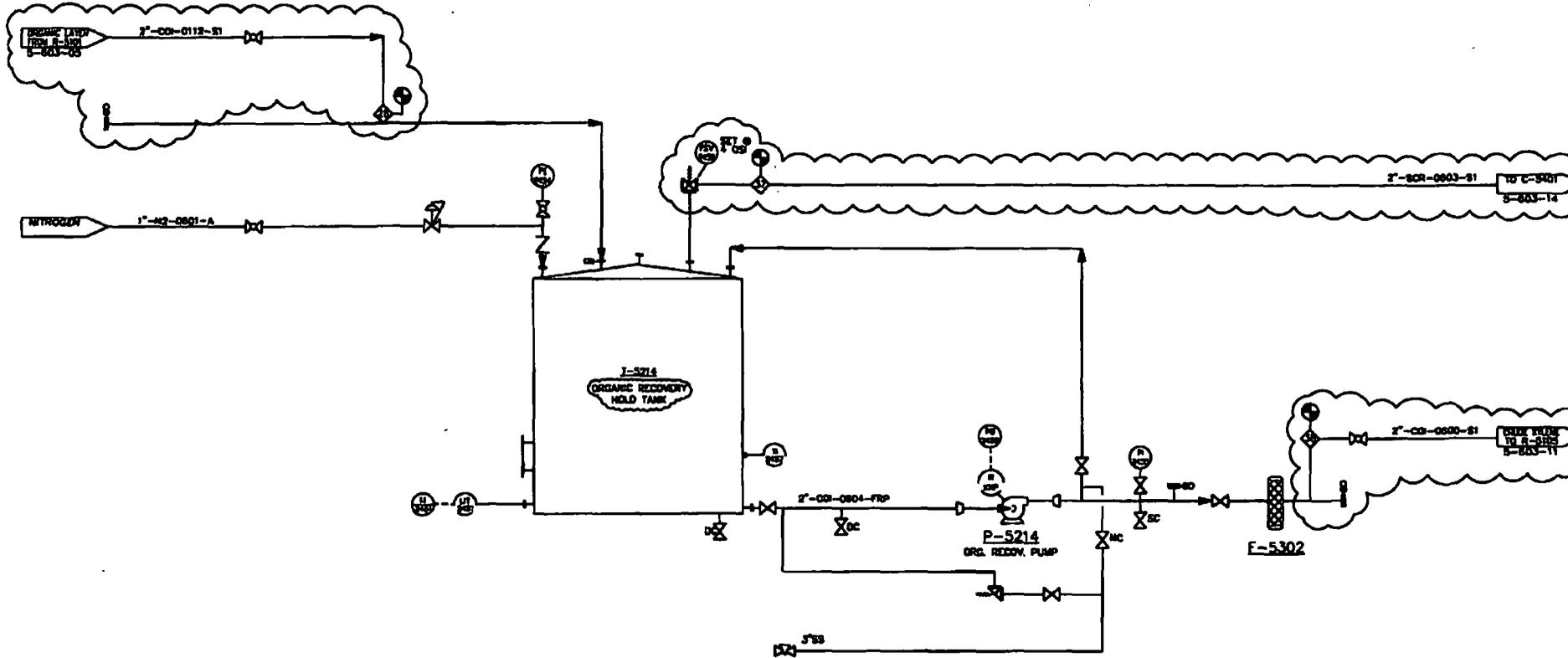
DATE: 5-603-07

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ED. NO. 1-5214
 TITLE ORG. RECOV. HOLD TANK
 TYPE VERTICAL
 VENDOR
 MATL CS LINED
 SIZE
 HP
 RPM
 CAPACITY 17,000 GAL
 TEMP
 PRES

ED. NO. P-5214
 TITLE ORG. RECOV. PUMP
 TYPE CENTRIFUGAL
 VENDOR DUKES MFG. I
 MATL 316 SS
 SIZE 3 X 1.5 - 8
 HP
 RPM 1800
 CAPACITY 140 GPM
 TEMP
 PRES 100' TDH

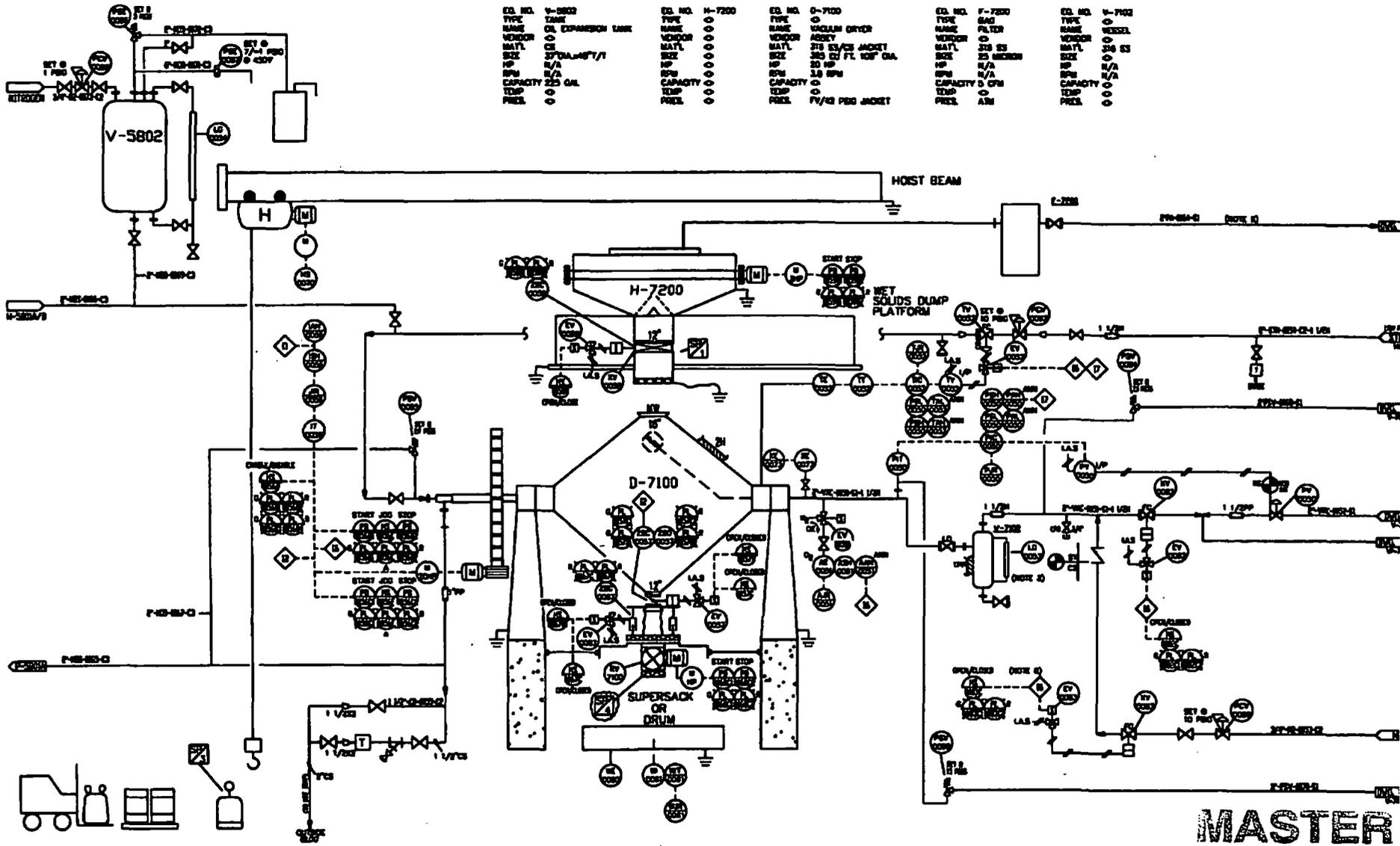
ED. NO. F-5302
 TITLE CARTRIDGE
 TYPE
 VENDOR
 MATL
 SIZE 150 MICRON
 HP
 RPM
 CAPACITY
 TEMP
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MASTEI

CEDAR CHEMICAL CORPORATION
 WEST HELDEN, MISSOURI
 UNIT 5
 AVANTIS CYCLANILIDE
 PIPING & INSTRUMENTATION DIA
 ORGANIC RECOVERY STORAGE
 NONE 5-603-10

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EQ. NO.	V-5802	EQ. NO.	H-7200	EQ. NO.	D-7100	EQ. NO.	F-7200	EQ. NO.	V-7200
TYPE	DRUM	TYPE	DRUM	TYPE	VACUUM DRYER	TYPE	PLATE	TYPE	DRUM
NAME	DRUM								
MATERIAL	304 SS								
SIZE	30" DIA. x 48" H								
WGT.	1000 LBS.								
CAPACITY	250 GAL.								
PREL.	0.0000								

- NOTES**
1. ALL BOOPS TO BE CORROSION TREATED PITTS FOR ELECT. RESISTANCE
 2. ALL CONNECTIONS TO BE ELECTRICALLY BONDING STYLE W/CLAMP GLASS LOCATED ON HEXAZAMINE AND GROUND LEVEL.
 3. ROUTE TO SAFE LOCATION
 4. ROUTE ABOVE ROOF W/RAIN HAT
 5. IS PROTECTIVE TROUGH @ 30 NOS
 6. FLANGE @ 87 JTS

- INTERLOCK LOGIC**
- 17 - HIGH PRESS S/D STOP
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- SPECIALTY ITEMS**
1. TRANSMITTER
 2. PNEUMATIC LIG SEALER
 3. HIGH WATER/DRUM
 4. SWITCH OFFER

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CEDAR CHEMICAL CORPORATION
 WEST WELDON, VIRGINIA
 UNIT 5
 AMENTS CYCLANLIDE
 PIPING & INSTRUMENTATION DIAG

DATE	5/2/80	TIME	10:00
BY	JTC	CHKD	JTC
DATE	5/2/80	TIME	10:00
BY	JTC	CHKD	JTC

SCALE: NONE
 DRAWING NO: 5-603-18

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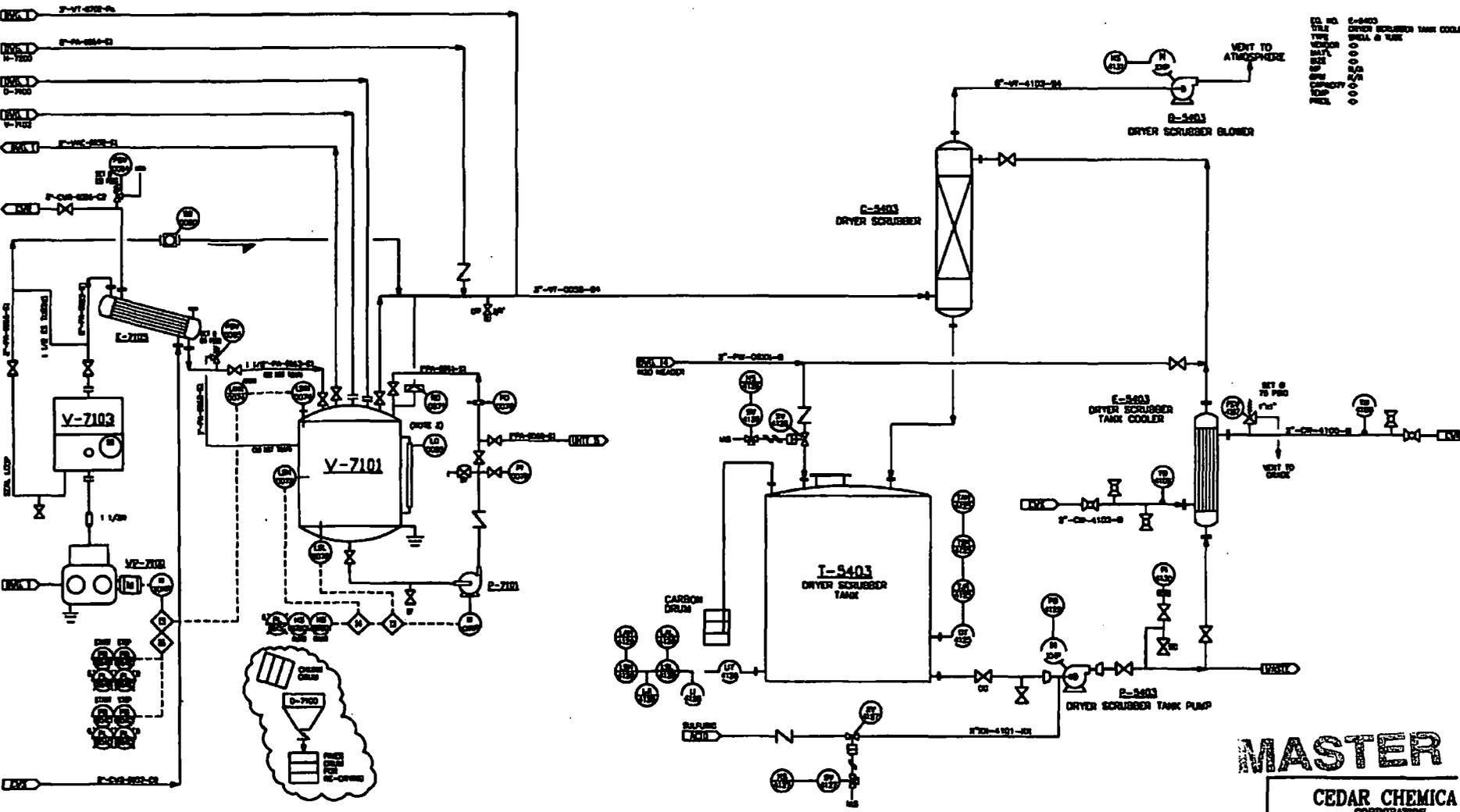
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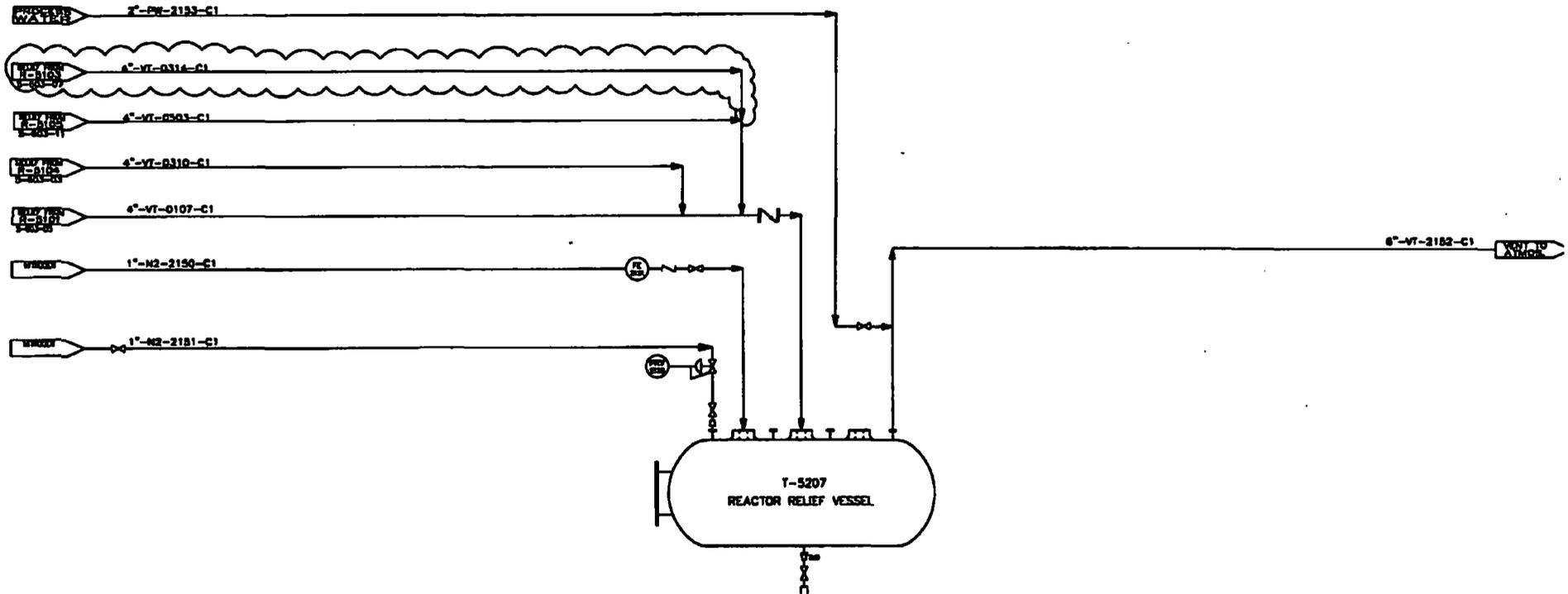


MASTER

CEDAR CHEMICAL CORPORATION	
WEST HELIX, ARIZONA	
UNIT	
AVENTS CYCLANILIDE PIPING & INSTRUMENTATION DIA	
SCALE	NONE
NO.	5-603-17

NO.	REVISIONS	DATE	BY	CHKD	APP'D
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EQ. NO. T-5207
 TYPE REEL
 NAME REACTOR RELIEF VESSEL
 VENDOR Taylor - Forge
 MATL 316 SS
 SIZE 8'0" x 18'
 HP N/A
 RPM N/A
 CAPACITY 2500 GAL
 TEMP 40 C
 PRES. 1100 PSIG



MASTER

CEDAR CHEMICAL CORPORATION
 WEST HAVEN, CONNECTICUT
UNIT FIVE
 AVENTIS CYCLANILIDE
 PIPING & INSTRUMENTATION DIA
 VENT CONDENSER & RELIEF VE

DATE	BY	CHKD	DATE
8/18/00	TGC		8/18/00
8/18/00	TGC	MSF	8/18/00

TOTAL NONE
 5-603-18

NO.	REVISIONS	DATE	BY	CHKD	DATE
1	GENERAL REVISIONS	8/18/00	TGC		
2	FOR ENGINEERING	8/18/00	TGC	MSF	8/18/00

SAFETY DATA SHEET

Publication date : 22/01/92

Sheet number: 1034

Revised on : 30/05/00

1) IDENTIFICATION OF THE SUBSTANCE/PREPARATION

Commercial name :

CYCLANILIDE TECHNICAL

Company identification :

- AVENTIS CropScience SA -
55, avenue René Cassin
69009 LYON
FRANCE

Emergency numbers :

Tél: 04 72 85 25 25 ---- Fax: 04 72 85 27 99

Official advisory body :

→ ORPILA Téléphone 01 45 42 59 59

2) COMPOSITION / INFORMATION ON INGREDIENTS

GIFAP code : TC

Cyclanilide..... 100 %

- CAS number : 113136-77-9

3) HAZARDS IDENTIFICATION:

HAZARDOUS

DANGEROUS FOR THE ENVIRONMENT

Harmful if swallowed (R 22)

Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic (R 51/53)

4) FIRST AID MEASURES

After contact with skin, wash immediately with plenty of water (S 28)

In case of contact with eyes, rinse immediately with plenty of water for 20 minutes.

If swallowed, seek medical advice immediately and show this container or label (S 46)

If you feel unwell, seek medical advice (show the label where possible)

5) FIRE-FIGHTING MEASURES

Combustible, danger of toxic gases in smoke :

- Carbon and nitrogen oxides, hydrochloric gas

Avoid the escape of fire-fighting water to the environment.

Recommended fire-fighting media: foam, carbon dioxide, dry powders, waterspray.

Wear self-contained breathing apparatus.

6) ACCIDENTAL RELEASE MEASURES

Recover the product by damping then sweeping or suction.

To dispose of material, refer to section 13: 'Waste and disposal consideration'.

7) HANDLING AND STORAGE

Handling :

When using do not eat, drink or smoke (S 20/21)

Storage :

Keep out of the reach of children (S 2)

Keep away from food, drink and animal feeding stuffs (S 13)

8) EXPOSURE CONTROLS AND PERSONAL PROTECTION

Extract residual dust at its point of emission.

Wear gloves, goggles, mask with cartridge.

PEL for Dimofuren : 3 mg/m³ (internal to RP)TLV of Cyclanilide : 0.7 mg/m³ (Internal RP)

~~Aventis-CropScience~~



DATE: 5/7/01

TO: LISA

NUMBER OF FAXED SHEETS 3
Including Cover Sheet
FAX 870-572-3795

PHONE _____

FROM: Fred Snider _____

FAX: 919-549-9724

PHONE: 919-549-2469

NOTES: LISA

This is a old MSDS From
when we where Rhone PoLenc.
IT is still good. The product
is NOT Regulated.

SAFETY DATA SHEET

Publication date : 22/01/02

Sheet number : 1034

Revised on : 24/03/03

1) IDENTIFICATION OF THE SUBSTANCE/PREPARATION

Commercial name :

CYCLANILIDE

Company identification :

Rhône-Poulenc Agrochimie
14-20, rue Pierre Salzet
69600 LYON
FRANCE

Emergency numbers :

Telephone : (33)72.20.25.25 Fax : (33)72.20.27.00

ORFILA number :

(33) 1-43.42.99.99

2) COMPOSITION / INFORMATION ON INGREDIENTS

Cyclanilide..... 100 %

SDS code : 10

3) HAZARDS IDENTIFICATION

HAZARDOUS

Harmful if swallowed (H 302)
Irritating to eyes (H 361)

4) FIRST AID MEASURES

After contact with skin, wash immediately with plenty of water (S 791)
In case of contact with eyes, rinse immediately with plenty of water for 20 minutes.
If swallowed, seek medical advice immediately and show this container or label (S 60)
If you feel unwell, seek medical advice (show the label where possible)

5) FIRE-FIGHTING MEASURES

Combustible, danger of toxic gases in smoke :
- Carbon and nitrogen oxides, chlorhydric gas
Avoid the escape of fire-fighting water to the environment.
Recommended fire-fighting media: foam, carbon dioxide, dry powders, spray water.
Use a self-contained breathing apparatus.

6) ACCIDENTAL RELEASE MEASURES

Recover the product by damping thus avoiding or suction.
To dispose of material, refer to section 13: 'Waste and disposal consideration'.

7) HANDLING AND STORAGE

Handling :

When using do not eat, drink or smoke (S 20/21)

Storage :

Keep out of reach of children (S 7)

Keep away from food, drink and animal feeding stuffs (S 13)

8) EXPOSURE CONTROLS AND PERSONAL PROTECTION

Extract residual dust at its point of emission.
Wear gloves, goggles, mask with cartridge.



Publication date : 22/01/92	Sheet number: 1034	Revised on : 24/03/92
9) PHYSICAL AND CHEMICAL PROPERTIES		
Appearance	: Solid Crystalline powder white	
Melting Range	: (°C) : 189.5 - 190.0	
10) STABILITY AND REACTIVITY		
Stable under normal conditions of use No dangerous reaction known under normal conditions of use.		
11) TOXICOLOGICAL INFORMATION		
LD 50 oral route (mg/Kg)	: 200 (Female Rat)	
LD 50 oral route (mg/Kg)	: 315 (Male Rat)	
DL 50 Dermal (Rabbit) (mg/Kg)	: > 2000	
Ocular application	: Irritant (Rabbit)	
Dermal application	: Slightly Irritant (Rabbit)	
No constituting effect on guinea-pig.		
Ames test: negative		
Known antidote	: No specific antidote known, symptomatic treatment.	
12) ECOLOGICAL INFORMATION		
Toxic to aquatic organisms (R 91)		
LC 50 (mg/l)	: 11 (Rainbow Trout)(96h)	
EC 50 (mg/l)	: 8 (Daphnia)(48h)	
13) DISPOSAL CONSIDERATIONS		
Manufacturer's packaging must be completely empty. Incineration in a licensed installation, product and contained packaging.		
14) TRANSPORT INFORMATION		
R10/ADR Not regulated MARITIME Not regulated AIR Not regulated		
15) REGULATORY INFORMATIONS		
EU labelling	: Xn	R Phrases: 22-36
FRANCE labelling	: R Phrases:	S Phrases: 12-13-20/21-43
WHO classification:		C Phrases:
16) OTHER INFORMATIONS		
technical material		
THIS INFORMATION CONCERNS ONLY THE PRODUCT CONFORMING TO ITS SPECIFICATION AND LIMITED TO THE USES MENTIONED. This sheet complements the technical sheet of use but doesn't replace it. The informations contained on this sheet are based on knowledge of the product on the date of publication. They are given in good faith.		



Assumptions:

- | | |
|---|--|
| 1. Average Rate @ 65% Overall O.S.T. | 6. All Yield calculations based on DCA |
| 2. 0.5% Material Loss through centrifugation | 7. --- |
| 3. Centrifuge discharge @ 20% LOD | 8. --- |
| 4. Centrifugation Cycle=1.25 hours @ 300 lb./plow | 9. --- |
| 5. Vac. Dryer discharge at 0.5% LOD | 10. --- |

Limiting Cycle Time:	16.5 hours
Instantaneous Rate	
Final Product lb/bx:	3,143 lb
Final Product lb/day:	4,562 lb/day
Final Product MT/day:	2.1 MT/day
Average Rate @ 65% OAOST	
Final Product lb/bx:	2,043 lb
Final Product lb/day:	2,965 lb/day
Final Product MT/day:	1.3 MT/day

Stream No.	Description	R-4 Charge	CPDM Charge	NaOCH3 Charge	MeOH Strip	Coupling Water Charge	Intermed Xferred to R-1	Hydroly's Water Charge	R-1 Hydr. Intermediate	MeOH Distillat'n	Intermed. Xferred to R-3 (AQ)	Hydroly. Org. Phase to Rec'y
	Component											
	MW											
	Raw Materials											
	CPDM		2,146.8									
	2,4 DCA	2,200.0										
	NaOCH3			670.8								
	MeOH			1,565.1								
	H2O					6,222.7	6,222.7	2,921.3	9,144.0		9,144.0	
	NaOH											
	Formic Acid											
	Xylene	7,982.8			23.8		7,959.0		7,959.0			7,959.0
	(By) Products											
	Na-CPMPA						4,000.2					
	MeOH				2,359.8				412.8	412.8		
	Na-RPA 90946								3,628.6		3,628.6	
	RPA 90946											
	NaCHO2											
	Others											
	Stream Weight, lb/batch	10,182.8	2,146.8	2,235.9	2,383.6	6,222.7	18,181.8	2,921.3	21,144.4	412.8	12,772.6	7,959.0
	Stream Volume, gal (ft3)	1,313.0	224.7	223.7	361.2	747.0	2,352.7	350.7	2,762.5	62.6	1,580.7	1,099.5
	Temperature, °F	77.0	104.0	140.0	146.3	145.0	145.0	140.0	77.0	212.0	68.0	77.0
	Pressure, psia (torr)	14.7	(180)	(180)	(180)	14.7	14.7	14.7	14.7	14.7	14.7	14.7
	Density, g/cc (lb/ft3)	0.93	1.15	1.20	0.79	1.00	0.93	1.00	0.92	0.79	0.97	0.87
	Viscosity, cP (cSt)											
	Molar Yield (Overall)						95.0%		95.0%			
	Vessel Nominal Volume, gal (ft3):	2,870.0	2,870.0	2,870.0			2,870.0		3,500.0		3,000.0	17,000.0
	Vessel Filled Level (%):	46%	54%	61%			82%		78.9%		53%	6%

**Aventis Cyclanilide in Unit 5—2,
Heat & Mass Balance**

Assumptions:

1. Average Rate @ 65% Overall O.S.T.
2. 0.5% Material Loss through centrifugation
3. Centrifuge discharge @ 20% LOD
4. Centrifugation Cycle=1.25 hours @ 300 lb./pl
5. Vac. Dryer discharge at 0.5% LOD

Stream No.		R-3 Acid Charge	Precipit'd Prod't to Centrif.	Centrif. Wash Water	M/L Disch. To T-5208	Centrif'd Matl to Holoflgt	Holoflgt Dryer Disch	Holoflgt Vent Disch	Wet Prod't to Dryer	Vac Dryer Vent Disch	Dried Final Product	Xylene to Recycle
Component	MW											
Raw Materials												
CPDM	158.10											
2,4 DCA	162.02											
NaOCH3	54.02											
MeOH	32.00											
H2O	18.00	100.9	9,144.0	6,030.7	14,380.9	793.8	785.8	7.9	785.8	770.1	15.7	1.2
NaOH	40.00											
Formic Acid	46.03	571.6										
Xylene	106.17											7,959.0
(By) Products												
Na-CPMPA	310.10											
MeOH	32.00											
Na-RPA 90946	296.10											
RPA 90946	274.10		3,191.1			3,175.1	3,143.3		3,143.3		3,127.6	
NaCHO2	68.01		844.4		844.4							
Others	---											158.8
Stream Weight, lb/batch		672.4	13,179.5	6,030.7	15,225.4	3,968.9	3,929.2	7.9	3,929.2	770.1	3,143.3	8,118.9
Stream Volume, gal (ft3)		68.4	1,631.1	724.0	1,740.7	453.8	449.2	0.9	{105.11}	92.5	{126.14}	1,124.6
Temperature, °F		77.0	68.0	68.0	68.0	68.0	68.0	68.0	212.0	212.0	212.0	68.0
Pressure, psia (torr)		14.7	14.7	14.7	14.7	14.7	14.7	14.7	14.7	14.7	14.7	14.7
Density, g/cc (lb/ft3)		1.18	0.97	1.00	1.05	1.05	1.05	1.05	{37.4}	{1.00}	{24.9}	0.87
Viscosity, cP (cSt)												
Molar Yield (Overall)			95.0%								{85.7%}	
Vessel Nominal Volume, gal (ft3):			4,000.0	4,000.0	30,000.0				{240.0}	500.0	{240.0}	4,000.0
Vessel Filled Level (%):			41%	18%	6%				44%	18%	---	51%



Internal Correspondence

To: Peter Fields
CC: C. McGee, J. Rone
From: David C. Guffey
Date: 17 December 1999
RE: Cyclanilide 90946 Project—Projected Waste Costs *REVISED*

Please be advised that we are currently investigating a new project for Rhone-Poulenc Agro, Cyclanilide 90946, with a projected startup of mid next year. Following are the preliminary worst-case waste figures based on a 15 hour cycle time with a 3,900 lb/batch (2Trains) payload:

Organic Waste:

<u>Component</u>	<u>Daily Prod'n (lb/day)</u>	<u>% of Stream</u>	<u>Est. Volume (gal/day)</u>
Water	16.6	0.3	2.0
Toluene	1,917.8	33.2	264.6
Methanol	3,459.2	59.8	525.7
Others (Heavies)	389.4	6.7	Solid in Sol'n

Aqueous Waste (Case I).

<u>Component</u>	<u>Daily Prod'n (lb/day)</u>	<u>% of Stream</u>	<u>Est. Volume (gal/day)</u>
Water	2,210.7	57.0	2555.8
Sodium Formate	1,667.7	43.0	Solid in Sol'n

Aqueous Waste (Case II):

<u>Component</u>	<u>Daily Prod'n (lb/day)</u>	<u>% of Stream</u>	<u>Est. Volume (gal/day)</u>
Water	12,965.1	88.6	2555.8
Sodium Formate	1,667.7	11.4	Solid in Sol'n

Please estimate waste costs on a *per lb.* basis for this project and disposal options—*i.e. transfer to ponds, incineration, landfill, etc.*

Assumptions:

1. Average Rate @ 65% Overall O.S.T.
2. 0.5% Material Loss through centrifugation
3. Centrifuge discharge @ 20% LOD
4. Centrifugation Cycle=1.25 hours @ 300 lb./pl
5. Vac. Dryer discharge at 0.5% LOD

Stream No.													
Description		Recycled Xylene	Water to Recycle	Forerun Cut to Org Waste	Recycled Water	Organic Waste	Salt Waste						
Component	MW												
Raw Materials													
CPDM	158.10												
2,4 DCA	162.02												
NaOCH3	54.02												
MeOH	32.00			25.0		25.0							
H2O	18.00		15,166.8	200.0	14,993.8	1.2	173.0						
NaOH	40.00		1,136.8										
Formic Acid	46.03												
Xylene	106.17	6,337.2		30.0		1,621.8							
(By) Products													
Na-CPMPA	310.10												
MeOH	32.00					2,772.6							
Na-RPA 90946	296.10												
RPA 90946	274.10												
NaCHO2	68.01		844.4				844.4						
Others	---					158.8							
Stream Weight, lb/batch		6,337.2	17,148.0	255.0	14,993.8	4,579.3	1,017.4						
Stream Volume, gal (ft3)		877.8	1,906.1	38.3	1,800.0	671.0	(14.20)						
Temperature, °F		75.0	68.0	68.0	68.0	68.0	68.0						
Pressure, psia (torr)		14.7	14.7	14.7	14.7	14.7	14.7						
Density, g/cc (lb/ft3)		(0.87)	1.08	0.80	1.00	0.82	(71.65)						
Viscosity, cP (cSt)													
Molar Yield (Overall)													
Vessel Nominal Volume, gal (ft3):			9,000.0			5,000.0	(27.0)						
Vessel Filled Level (%):			21%			13%	53%						

Aventis Cyclanilide in Unit 5—2,4-DCA Whole Drum Charge
Cycle Time Analysis

		<u>Step Cycle</u> <u>Time</u>	<u>Vessel Cycle</u> <u>Time</u>	
Coupling Reaction (R-5104)	Press/Vac Test	1.0		
	Charge DCA	<u>0.8</u>		
	Charge Xylene	<u>0.9</u>		
	Heat to 40°C	0.5		
	Charge CPDM	<u>0.8</u>		
	Draw Vacuum	0.3		
	Heat to 60°C	0.8		
	Charge Na Methoxide	2.5		
	Distill MeOH/Xylene	<u>1.9</u>		
	Charge Water	<u>0.6</u>		
	Stir/Settle	1.5		
	Transfer to Hydrolysis Rxtr	<u>1.0</u>		$\Sigma =$ 12.6
Hydrolysis Reaction (R-5101)	Charge Water	<u>0.4</u>		
	Draw Vacuum	0.7		
	Heat/Reflux	3.0		
	Distill MeOH	3.0		
	Phase Separate / Transfer	2.0		$\Sigma =$ 9.0
Precipitation (R-5103)	Charge Formic Acid	1.5		
	Mix	1.0		
	Sample/Results	0.8		
	Transfer	<u>1.4</u>		$\Sigma =$ 6.0
Isolation (V-5312, CF-5701, D-5700)	Centrifuge Batch	<u>16.5</u>		$\Sigma =$ 16.5 (240 lb/hr)
Drying/Packaging (D-7100)	Charge <u>2</u> batches	2.0		
	Dry Batch	18.0		
	Packout	2.0		$\Sigma =$ 11.0 (allocated time/batch)

Rate Limiting Vessel Time 16.5 hours
--

Total Time for Batch: 55.2 hours
 (Charge to Packout)

Notes:

nn.n indicates calculated value,
 otherwise value is estimated

Aventis

**Memorandum of Understanding - Cyclanilide
Dated September 1, 2000**

Aventis CropScience



CEDAR
Mr Geoffrey L. PRATT
5100 Poplar Ave.
Suite 2414
Memphis, TN 38137
UNITED STATES

September 1, 2000

Réf : fb/SR 108.00

CONFIDENTIAL

SUBJECT : MoU OF CYCLANILIDE

Dear Geoffrey,

Please find enclosed two originals of the MoU which have been signed by Hans Moser on behalf of Aventis CropScience.

Thank you for your cooperation.

Best Regards.

P/o Fede de hant
Serge RAVET
Toll manufacturing manager

MEMORANDUM OF UNDERSTANDING

THIS MEMORANDUM OF UNDERSTANDING is made and entered into as of the date last below written (the "Effective Date"), by and between

Cedar Chemical Corporation, a Delaware corporation, having its principal place of business at Suite 2414 Clark Tower, 5100 Poplar Avenue, Memphis, Tennessee 38137 (hereinafter referred to as "CEDAR"),

and

Aventis CropScience Matières Actives, a French "société en nom collectif" having its registered office at 14/20, rue Pierre Baizet, 69009 LYON, France (hereinafter referred to as "Aventis").

Witnesseth:

- ◆ WHEREAS, Aventis desires to retain an independent third party contractor to toll manufacture for it Cyclanilide (1-(2,4-dichlorophenylaminocarbonyl)-cyclopropane carboxylic acid) (hereinafter "Product") from 2,4 DCA (2,4 Dichloro aniline) (hereinafter "DCA") and (cyclopropane- 1,1-dicarboxylic acid dimethyl ether (CPDM) (hereinafter "CPDM"), DCA and CPDM together with Sodium Methoxide (hereinafter "NaMO") being sometimes referred collectively herein as the "Raw Materials"; and
- ◆ WHEREAS, CEDAR owns and operates a chemical manufacturing facility located at West Helena, Arkansas which, following installation of certain capital improvements and equipment (the "Capital Improvements"), is deemed capable of producing Product from DCA and CPDM utilizing Aventis' manufacturing process (the "Process") disclosed by Aventis to Cedar pursuant to a Secrecy Agreement between Aventis and Cedar dated as of May 14, 1999 (the "Secrecy Agreement"); and processes disclosed to Cedar pursuant to a Secrecy Agreement between Aventis and Cedar dated as of November 22, 1999 (the "Degussa Secrecy Agreement").
- ◆ WHEREAS, it is agreed that CEDAR and Aventis shall promptly commence negotiations with each other in good faith with the intent of reaching an agreement (the "Agreement") satisfactory in form and substance to their respective managements and incorporating the terms and principles set forth herein.

NOW, THEREFORE, in consideration of the premises and the terms and conditions herein contained, the Parties agree as follows:

Article 1 - Purpose. The purpose of this Memorandum of Understanding is to set forth the terms and principles under which the parties will negotiate in good faith with the objective of entering into a toll manufacturing and supply Agreement whereby Cedar will produce Product for Aventis, and under which Cedar will initiate engineering studies and make equipment purchase commitments to enable it to construct and complete the Capital Improvements in time to begin producing Product for Aventis in the fourth quarter of the year 2000 in the quantities and in accordance with the terms and conditions set forth herein.

Article 2 - Agreement. The parties intend to negotiate in good faith with the objective of entering into an Agreement which will include among other terms, the following provisions:

A. **Term.** The initial term (the "Initial Term") shall be from the date of execution of the Agreement through December 31, 2006. Thereafter, the term of the Agreement shall be renewed for successive two year periods unless terminated by either party upon notice to the other not less than one (1) year prior to the end of the Initial Term or one year prior to the end of any extension of the Initial Term of Agreement; provided that the Agreement shall not be so extended unless, prior to the end of the Initial Term or of any extended term, the parties will have negotiated and reached mutual agreement in respect of the terms of such extension (including the price and quantity).

B. **Raw Materials.** Aventis shall be responsible for supplying Cedar, at its cost, the Raw Materials in sufficient quantities to enable Cedar to produce, in campaigns scheduled in accordance with the provisions of Article 2D, all quantities of Product ordered by Aventis, provided that in the event Cedar is able to obtain a more favorable price than Aventis for purchase of NaMO, following prior approval from Aventis, Cedar shall purchase such quantities of NaMO as shall be required for it to perform hereunder, but for the account of Aventis. Cedar shall supply, at its cost, all raw materials other than the Raw Materials and Aventis shall reimburse Cedar its actual cost for the purchase of such raw materials within thirty (30) days following the date of Cedar's invoice, provided that Cedar shall in all cases employ a reasonable competitive purchasing process. Cedar shall reimburse Aventis for all of Aventis' costs in supplying Raw Materials to Cedar, if such Raw Materials are used by Cedar to produce Product, which due to Cedar's negligence or failure to follow Aventis' process, does not meet the specifications set forth in Appendix A.

C. **Product.** Aventis shall order and Cedar shall produce from Raw Materials supplied by Aventis not less than seven hundred ninety (790) metric tons of Product during the Initial Term of the Agreement. For indicative purposes, Aventis' current estimate of its yearly requirements for the Product is one hundred fifty (150) metric tons per year, provided that such figure is provided for information purposes only and will not be binding.

Aventis shall order and purchase eighty (80) metric tons of Product from Cedar by December 31, 2000, and shall order and purchase one hundred fifty (150) metric tons of Product from Cedar by December 31, 2001.

In the event Aventis shall not have ordered and purchased from Cedar pursuant to the Agreement, at least one hundred and twelve (112) metric tons of Product during 2002 and in each calendar year of the Initial Term thereafter, then Aventis shall pay an amount equal to \$8.00 multiplied by the difference between the amount of Product ordered and purchased and one hundred and twelve (112) metric tons, provided however, that any such amounts paid by Aventis will be credited as a prepayment for any Product to be delivered in the following calendar year of the Initial Term in excess of one hundred and twelve (112) metric tons.

If during 2002 or any calendar year of the Initial Term thereafter, Aventis orders and purchases an amount of Product which exceeds one hundred and twelve (112) metric tons, such excess shall be credited towards, and shall thereby reduce, Aventis' commitment in respect of the one hundred and twelve (112) metric tons of Product for the following calendar year of the Initial Term, provided that the credit will be limited to twenty-eight (28) metric tons.

D. **Scheduling.** Aventis shall submit its good faith estimate of its orders for Product to be produced by Cedar in each calendar year during the term of the Agreement by no later than July 1 of the previous calendar year, provided that such estimate will be for the purpose of facilitating scheduling of manufacture only and will not be binding, provided that a firm order will be issued by Aventis by October 31 of such year, which order shall specify the delivery date(s) for the Product.

E. **Raw Material Usage.** Maximum usage factors applicable to consumption of Raw Materials (expressed in kilograms of Raw Materials consumed per kilogram of Product) shall be determined based on actual results achieved during the first industrial production of Product by Cedar. Thereafter, any over-consumption of Raw Materials (of more than 3.5%) shall be for Cedar's account. The savings on any under-consumption of Raw Materials of more than 3.5% shall be shared equally by the parties.

F. **Capital Improvements.** Cedar's cost of Capital Improvements shall be amortized over the first seven hundred ninety (790) metric tons of Product to be produced by Cedar and paid for by Aventis during the Initial Term of the Agreement. For example, if the agreed cost of the Capital Improvements for which Aventis shall be responsible is \$750,000.00, \$ 0.95 for each kilogram of Product purchased by Aventis from Cedar hereunder shall be credited to Aventis' obligation to reimburse Cedar's cost of Capital Improvements. If Cedar has not been totally reimbursed for the agreed cost of the Capital Improvements by December 31, 2006, Aventis shall be responsible for reimbursing Cedar the balance of its costs of Capital Improvements set forth in Appendix B by December 31, 2006.

G. **Startup.** Aventis shall provide reasonable technical assistance to Cedar during startup of the initial campaign.

H. **Waste Disposal.** The parties shall cooperate to determine the most cost effective and environmentally sound method to dispose of wastes generated by production of Product. Costs of waste disposal shall be for Aventis' account, provided that the cost of the waste disposal charge to Aventis shall not exceed \$ 1.25 per kilogram of Product.

I. **Toll Fees.** Cedar's toll manufacturing fee for production of Product for Aventis during the Initial Term shall be \$8.00 per kilogram for all Product ordered for production. The fee set forth above includes all amounts relating to the depreciation of the Capital Improvements referred to in Article 2F above). Commencing with the calendar year 2002, and each calendar year thereafter, the fees set forth above may be adjusted, to reflect increases in manufacturing costs according to the escalation formula set forth in Appendix C hereto.

Cedar shall invoice Aventis at the end of each month during the term of the Agreement for all quantities of Product delivered during such month, which deliveries shall be Ex works, at the applicable toll manufacturing fee, and for all raw materials (including NaMO) purchased by Cedar hereunder. Such invoices shall be due and payable by Aventis thirty (30) days from date of invoice.

J. **Miscellaneous.** The Agreement shall contain additional terms and provisions normally contained in agreements of this nature.

Article 3 - Schedule of Target Dates.

A. The detailed engineering drawings describing the Capital Improvements, and Cedar's final cost to install the Capital Improvements to be amortized over the Initial Term of Agreement are attached as Appendix B. Appendix B includes a schedule of the costs incurred and to be incurred by Cedar while negotiation of the Agreement is pending. All such costs and contractual commitments incurred by Cedar as set out in such schedule of costs shall be for Aventis' account, either for amortization and reimbursement in accordance with the provisions of Article 2F hereinabove, or, alternatively, in the event that, following good faith negotiations, the Agreement is not executed by the parties on or before December 31, 2000, or, if the Agreement is executed by the parties, but is subsequently terminated for reasons other than for default by Cedar prior to the end of the Initial Term, such costs (to the extent incurred by Cedar and unamortized) shall be paid in full by Aventis to Cedar upon the occurrence of any such event.

B. The Product and Raw Material specifications are attached as Appendix A. The Appendices hereto will be used as Exhibits to the Agreement.

C. On or before September 30, 2000, Aventis shall prepare and deliver to Cedar a proposed first draft of the Agreement.

D. The parties will work together with the objective of submitting a final draft of the Agreement to their respective managements for approval on or before October 31, 2000.

Article 4 - Nature of Agreement. The provisions of this Memorandum of Understanding are intended by the parties to be binding. This Memorandum of Understanding shall become effective on the Effective Date and remain valid until the earlier of the signature of the Agreement or December 31, 2000.

Article 5 - Confidentiality. The parties hereby agree that any information exchanged pursuant hereto shall be subject to the provisions of the Secrecy Agreement and shall be considered "Confidential Information" as such term is defined in the Secrecy Agreement, provided that: (i) the parties hereby agree to extend the term of the Secrecy Agreement until December 31, 2000 and (ii) any information exchanged pursuant hereto which would constitute Degussa-Huls Confidential Information as such term is defined in the Degussa Secrecy Agreement, shall be subject to the Degussa Secrecy Agreement.

Article 6 - Dispute Resolution, Applicable Law. All disputes arising in connection with the present Memorandum of Understanding shall be finally settled under the rules of Arbitration of the International Chamber of Commerce by one or more arbitrators appointed in accordance with the said Rules.

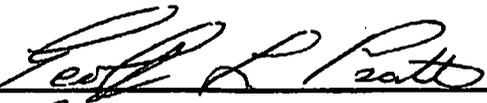
The arbitration shall be conducted in the English language in New York City.

This Memorandum of Understanding shall be construed in accordance with and governed by the laws of the State of New York.

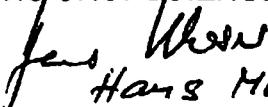
Article 7 - General. The terms of this Memorandum of Understanding may only be amended, modified or waived by a separate document in writing which has been signed by both parties. This Memorandum of Understanding supersedes any prior written or oral agreements or understandings between the parties with respect to the subject matter hereof and may be executed in counterparts, each of which shall constitute an original and all of which, when construed together, shall constitute the same instrument. Unless otherwise expressly agreed by the parties, neither party may transfer or assign this Agreement to any third party without the prior written consent of the other party.

Executed by the parties, acting by and through their authorized representatives, as of the dates appearing below.

CEDAR CHEMICAL CORPORATION

By: 
Name: GEORGEY L PRATT
Title: VICE PRESIDENT SPECIALTY CHEMICALS
Date: August 9, 2000

AVENTIS CROPSCIENCE MATIÈRES ACTIVES

By: 
Name: HANS MOSER
Title: Head Global Strategy
Date: 31. 08. 2000

Appendix A: Product and Raw Material Specifications

Appendix B: Capital Expenditures

Appendix C: Escalation Formula

APPENDIX A 1/4 : Product and Raw Material Specifications

Cyclanilide Specifications

1. ANALYTICAL SPECIFICATIONS

Determinations	Methods of analysis	Specifications (g/Kg)	Frequency
• Appearance	Visual	White to yellowish flowing powder	each batch
• CYCLANILIDE content	C.817.06.95	960 min.	each batch
• Water	CIPAC MT 30.1	5 max.	each batch
• Xylène	C.816.06.95	1 max.	each batch
Process Impurities :			
- RPA 116741 (imp.A)	C.821.07.95	3 max.	each batch
- 2,4 dichloroaniline	C.821.07.95	1 max.	each batch
- RPA 090945	C.821.07.95	10 max.	each batch
- RPA 111030	C.821.07.95	10 max.	each batch
- RPA 114924	C.821.07.95	15 max.	each batch
- RPA 093903	C.821.07.95	1 max.	each batch
- RPA 090899	C.821.07.95	1 max.	each batch

Cross contamination prevention :

All possible impurities from the implementation of an other production in the equipment involved in manufacturing of Cyclanilide, must be identified and quantified.

2. PACKAGING

- Polyéthylène drums : 120 l.
- Net weight : 50 Kg of Cyclanilide

APPENDIX A 2/4 : Product and Raw Material Specifications

2,4 Di Chloraniline Specifications (For Cyclanilide)

1. ANALYTICAL SPECIFICATIONS

Determinations	Methods of analysis	Specifications (g/Kg)	Frequency
• Appearance	Visual	Molten product colourless to brown	each batch
• Solidification point		60° C min.	each batch
• Purity	Gas chromatography	990 min.	each batch
• Water	Karl Fischer	1 max.	each batch
Process Impurities			
- 2,5 Di chloraniline	Gas chrom.	2 max.	each batch
- 2,6 Di chloraniline	Gas chrom.	1 max.	each batch
- 3,4 Di chloraniline	Gas chrom.	1 max.	each batch
- Others impurities (sum)	Gas chrom.	3 max. (1 max for each)	each batch
- Chlorides		100 ppm max.	

2. PACKAGING

- Steel drum for liquid product.

pl.

APPENDIX A 3/4 : Product and Raw Material Specifications

CDM Specifications

1. ANALYTICAL SPECIFICATIONS

Determinations	Methods of analysis	Specifications
• Purity	GC / MS	min. 97,50 %
• Dimethylmalonate	GC / MS	max. 1,00 %
• Dimethylformamide	GC / MS	max. 0,75 %

fl

APPENDIX A 4/4 : Product and Raw Material Specifications

Sodium Methylate Specifications Solution 30 % in Methanol

1. ANALYTICAL SPECIFICATIONS

Determinations	Methods of analysis	Specifications
<ul style="list-style-type: none">Total alkalinity calculated as : NaOCH₃ NaOCH₃ content	Titration	29,5 % - 31,0 % 29,5 % - 30,5 %
<ul style="list-style-type: none">Na₂CO₃ + NaOH content	Titration	Max 0,5 %
<ul style="list-style-type: none">Color	ISO 6271	Max 30 APHA

46.

APPENDIX B 1/1 : Capital Expenditures

Cost Estimate Summary : Cyclanilide Campaign

	Labor	Material	Total
• 1.0 Site work			
Subtotal	\$ 8 400,00	\$ 1 000,00	\$ 9 400,00
• 2.0 Civil			
Subtotal	\$ 23 275,00	\$ 11 500,00	\$ 34 775,00
• 3.0 Reactors (Colled/ Jacketed)			
Subtotal	\$ 25 550,00	\$ 27 600,00	\$ 53 150,00
• 4.0 Vessels/Tanks			
Subtotal	\$ 5 600,00	\$ 10 000,00	\$ 15 600,00
• 5.0 Heat exchangers			
Subtotal	\$ 1 750,00	\$ 18 000,00	\$ 19 750,00
• 6.0 Rotating Equipment			
Subtotal	\$ 6 300,00	\$ 31 000,00	\$ 37 300,00
• 7.0 Filtering Equipment			
Subtotal	\$ 700,00	\$ 6 000,00	\$ 6 700,00
• 8.0 Piping			
Subtotal	\$ 107 940,00	\$ 91 917,50	\$ 199 857,50
• 9.0 Electric/ Instrumentation			
Subtotal	\$ 104 860,00	\$ 158 750,00	\$ 263 610,00
• 10.0 Inspection/ Engineering			
Subtotal	\$ 35 000,00	\$ 0,00	\$ 35 000,00
• 11.0 Rentals & 12.0 Miscellaneous			
Subtotal	\$ 840,00	\$ 6 500,00	\$ 7 340,00
SUBTOTAL	\$ 320 215,00	\$ 362 267,50	\$ 682 482,50
Contingency (10 %)	\$ 32 021,50	\$ 36 226,75	\$ 68 248,25

APPENDIX C 1/1 : Fee Escalation Formula

Application commencing in 2002

$$P_{n+1} = P_n \left[0,15 + 0,425 \frac{W_{n+1}}{W_n} + 0,425 \frac{PPI_{n+1}}{PPI_n} \right]$$

- P_{n+1} = Adjusted toll fee for the contract year in \$ / Kg of Cyclanilide.
- P_n = Toll fee of the previous contract year in \$ / Kg of Cyclanilide
- W_{n+1} = Employment Cost Index published by the US Bureau of Labor Statistic available the month of december preceding the date of ajustement.
- W_n = Employment Cost Index of the previous contract year.
- PPI_{n+1} = Producer Price Index, for the available month of december preceding the date of ajustement :
 - Industry and Product : Industrial Organic Chemical, Code 296.
 - Subcategory : Agricultural Chemical, nbc, other pesticidal preparations primarily for agricultural, Code 2879 – 8.
- PPI_n = Producer Price Index of the previous contract year.

fl.

M. Garner

From: Dan.Stahl@aventis.com

Sent: Friday, September 01, 2000 8:23 AM

To: mgarner@cvrtmail.com

Cc: Serge.Ravet@aventis.com; Dave.Linhardt@aventis.com

Subject: PPI Index

Hi Melissa-

I don't think we've met yet but I am part of the same Aventis Global Sourcing Team Serge Ravet belongs to, however I'm located here in the US. I will be supporting Cedar and Serge in our implementation of the cyclanilide manufacturing.

Serge asked me to forward on to you the PPI Index information for the MOU. The Industrial Organic Chemicals is number 286 I believe you may have thought it was 296. 2879-8 is a valid code number that we found in hardcopy of the PPI Detailed Report. If you are doing your searching via the Internet, the Dept of Labor site can be difficult. Unless all the magic "symbols and spaces" are included in the query, the report may not print. Let me know if you would like me to obtain the data and we can fax to appropriate persons.

We also need your labor index. Thanks for your help, I'm sure we'll be in touch!

Dan Stahl

Aventis Global Sourcing

Phone: 919.549.2195

Fax: 919.549.2003

E-mail: Dan.Stahl@aventis.com



August 10, 2000

Serge Ravet
Toll Manufacturing Manager
Aventis Crop Science
14-20 rue Pierre Baizet - B.P. 9163 F-69263
Lyon Cedex 09
France

Dear Serge,

Enclosed are the three originals of the MOU which have been signed on behalf of Cedar. You will send us an original when Hans has signed for Aventis.

This will end my formal tour of duty on the project and you should contact Chris McGee regarding the Agreement which I believe you will draft. I will be available for comment and clarification as the Agreement proceeds, should that be necessary.

Regards,

A handwritten signature in black ink, appearing to read "Geoffrey Pratt", is written over a horizontal line.

Geoffrey Pratt

Cc: Chris McGee

Aventis CropScience



**CEDAR
Mr Geoffrey L. PRATT
5100 Poplar Ave.
Suite 2414
Memphis, TN 38 137
UNITED STATES**

3 August, 2000

Réf : fb/SR 106.00

CONFIDENTIAL

Subject : Cyclanilide MoU

Dear Geoffrey,

You will find herewith three copies for signature of the Cyclanilide MoU we agreed on.

While you will send them back , Hans Moser will be in the office to sign them on behalf of A.C.S.

Best Regards.

A handwritten signature in black ink, appearing to read "Serge Ravet".

**Serge RAVET
Toll Manufacturing Manager**

Vendor Number	Supplier	Item and Item Number	Terms Net
22195	PPG	ODCB 41000	60
		DCPI 40150	30
30160	UNION CARBIDE	ALL PRODUCTS	60
24804	RHONE POULENC	ALL PRODUCTS	90
26599	SOLUTIA	ODCB 41000	45
14015	CELANESE	ALL PRODUCTS	60
21760	NORTH HUNGARIAN	ALL PRODUCTS	90
09840	EL DORADO CHEMICAL	ALL PRODUCTS	60
27400	STEPAN COMPANY	ALL PRODUCTS	90
12796	GREIF BROS.	ALL PRODUCTS	60
06955	CONE SOLVENTS	ALL PRODUCTS	60
19520	METACHEM	ODCB 41000	60
00476	A H MARKS & CO. LIMIT	ALL PRODUCTS	90
09640	EASTMAN CHEMICAL	ALL PRODUCTS	60
00560	AIR PRODUCTS	ALL PRODUCTS	30
30585	VAN LEER CONTAINERS	ALL PRODUCTS	60
18360	MARMAN USA	ALL PRODUCTS	45
00270	ACETO CHEMICAL	ISOPHORONE 40500	120
		NITROMETHANE 42680	60
00620	CHEMTECH	ALL PRODUCTS	60
14455	IDEAL CHEMICAL	50% SODIUM HYDROXIDE 41530	90
		ALL OTHER PRODUCTS	60
23505	PRAXAIR	ALL PRODUCTS	30
07000	CONSOLIDATED PIPE	ALL PRODUCTS	30
16435	JOHNSON MATTHEY INC	1% PLATINUM ON THE CARBON	30
		PLATINUM METAL	2

Revisions in bold

ODCB
FORECAST

Company	real supply share	expected production	Communicated supply share	Communicated production plan	ODCB Demand
PPG	45	11300	50	10170	5746.05
SOI	35	11300	50	7910	4469.15
Meta	20	11300	30	7533.333333	2553.8

12769

3.5mm / Jan, Feb, Mar

8.5mm / 9mo

1ST QUARTER — 3.5mm
 2ND QUARTER — SLOW
 3RD QUARTER — MODERATE
 4TH QUARTER — MODERATE

Hoped 11,700 h # DCA
Comm. 7,900 h # DCA

YTD Sept 2,800 h # DCA

Oct 500 h # DCA

Nov Dec 2,000 h # DCA

5,300 h # DCA \Rightarrow 5,936 h #
OPCB

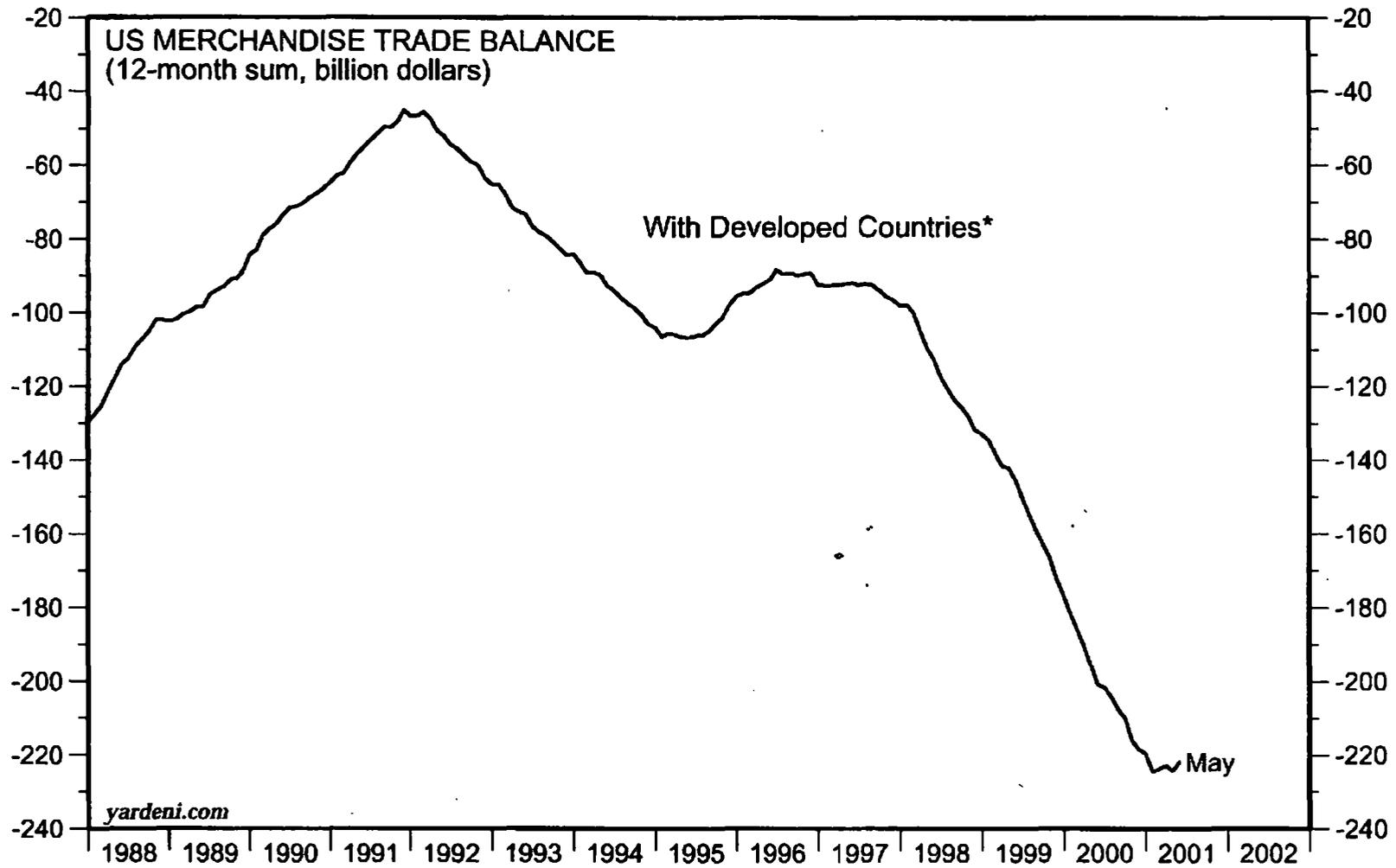
$$\frac{5,936 \text{ h}}{180 \text{ h}} = 33 \text{ cars}$$

Reduce Inv by 1 to 2 cars

31 \Rightarrow 32 cars

2 \Rightarrow 16

$$16 - 6 = 10 \text{ left}$$



* Canada, Western Europe, Japan, Singapore, Hong Kong, Taiwan, and the Republic of Korea.

Cedar-Brand Products	
Butoxone®	<p>Offers the most economical broadleaf control available for soybeans, peanuts, and alfalfa. Downloads: (in pdf format, requires free Acrobat Reader) </p> <p>Butoxone® 175 Specimen Label Material Safety Data Sheet Technical Use Bulletin</p> <p>Butoxone® 200 Specimen Label Material Safety Data Sheet Technical Use Bulletin</p> <p>Butoxone® 7500 Specimen Label Material Safety Data Sheet Technical Use Bulletin</p> <p>All (pdf in zip file) All Butoxone Products</p>
Eradicane®	<p>A selective herbicide that provides excellent control of grasses and broadleaf weeds and sedges in sweet corn. <i>For sale outside the European Union.</i> Downloads: (in pdf format, requires free Acrobat Reader) </p> <p>Specimen Label Material Safety Data Sheet</p>
fluometuron	<p>A selective herbicide that provides broad spectrum weed control in cotton. Downloads: (in pdf format, requires free Acrobat Reader) </p> <p>Specimen Label Material Safety Data Sheet</p>
Eptam®	<p>A selective herbicide that provides excellent control of annual grasses and broadleaf weeds in potatoes. <i>For sale outside the US, Canada and the European Union.</i></p>
Repose™	<p>For the control of most annual grasses and certain broadleaf weeds in cotton, dry bulb onions, dry bulb shallots, edible beans, field corn, forage legumes, garlic, grain sorghum, nonbearing fruit, nut crops and vineyards, peanuts, potatoes, rice, soybeans, sunflowers, sweet corn, sweet lupines, and tobacco. Downloads: (in pdf format, requires free Acrobat Reader) </p> <p>Specimen Label Material Safety Data Sheet</p>
Repose I™	<p>For the control of most annual grasses and certain broadleaf weeds in turf. Downloads: (in pdf format, requires free Acrobat Reader) </p> <p>Specimen Label Material Safety Data Sheet</p>

CE CHEM
 PRODUCTS

<p>Shroud™</p>	<p>A selective systemic herbicide used to control annual grasses and broadleaf weeds in field corn, soybeans, and peanuts. Downloads: (in pdf format, requires free Acrobat Reader)  Specimen Label Material Safety Data Sheet</p>
<p>SuppoRRt™</p>	<p>An economical herbicide specially formulated to tankmix with glyphosate products for weed and grass control in RR soybeans. Downloads: (in pdf format, requires free Acrobat Reader)  Specimen Label Material Safety Data Sheet Technical Use Bulletin</p>
<p>Sutan®</p>	<p>A selective herbicide for annual grass control in field, sweet, pop, and silage corn. Downloads: (in pdf format, requires free Acrobat Reader)  Specimen Label Material Safety Data Sheet</p>
<p>Ro-Neet®</p>	<p>A selective herbicide that controls weeds in sugar beets, table beets, and spinach. Downloads: (in pdf format, requires free Acrobat Reader)  Specimen Label Material Safety Data Sheet</p>
<p>Tillam®</p>	<p>A selective herbicide for weed control in tobacco, tomatoes, and sugar beets. Downloads: (in pdf format, requires free Acrobat Reader)  Specimen Label Material Safety Data Sheet</p>

Other Crop Protection Chemicals manufactured by Cedar

<p>DCA</p>	<p>Cedar is the only U.S. producer of this key intermediate in Diuron and Propanil.</p>
<p>diuron</p>	<p>Cedar is the only U.S. producer of this herbicide used for weed control in citrus, cotton, sugarcane, and rights-of-way.</p>
<p>linuron</p>	<p>A pre- and postemergence herbicide for weed control in crops such as cotton, potatoes, sorghum, carrots, soybeans, corn, parsnips, and others.</p>
<p>acetochlor</p>	<p>Used to control most annual grasses and certain broadleaf weeds and yellow nutsedge in a wide range of crops such as cabbage, citrus, coffee, corn (all types), cotton, green peas, maize, onion, orchards, peanuts, potatoes, rape, soybeans, sugar beets, sugarcane, sunflower, and vineyards.</p>
<p>alachlor</p>	<p>A selective systemic herbicide used to control annual grasses and broadleaf</p>

alachlor	A selective systemic herbicide used to control annual grasses and broadleaf weeds in field corn , soybeans , and peanuts .
butachlor	A selective preemergence herbicide for control of most annual grasses and certain broadleaf weeds in seeded and transplanted rice .
metolachlor	Used to control certain broadleaf and annual grassy weeds in field corn , soybeans , peanuts , grain sorghum , potatoes , pod crops , cotton , safflower , stone fruits , nut trees , highway rights-of-way , and woody ornamentals .
propachlor	A selective preemergence herbicide for control of certain grasses and broadleaf weeds in corn and grain sorghum .
EPTC	A selective herbicide that provides excellent control of annual grasses and broadleaf weeds in potatoes and sweet corn .
mollinate	A selective herbicide used to control broadleaf and grassy weeds in rice and other crops.
propanil	A postemergence herbicide used against grasses and broadleaf weeds in rice. (<i>Marketed exclusively by RICECO</i>)
pendimethalin	A pre- and postemergence herbicide used to control most annual grasses and certain broadleaf weeds in field corn, potatoes, rice, cotton, soybeans, tobacco, peanuts, sunflowers, turf, and other crops.
butylate	A selective herbicide for annual grass control in field , sweet , pop , and silage corn .
cycloate	A selective herbicide that controls weeds in sugar beets , table beets , and spinach .
pebulate	A selective herbicide for weed control in tobacco , tomatoes , and sugar beets .
dahemid & dichlormid	Safeners used in grass crop herbicides.

Product Groups

Chloroacetamides	<u>alachlor</u> , <u>metolachlor</u> , <u>acetachlor</u> , <u>propachlor</u>
Thiocarbamates	<u>EPTC</u> , <u>butylate</u> , <u>cycloate</u> , <u>pebulate</u> , <u>mollinate</u>
Acetamides	<u>propanil</u> (<i>Marketed exclusively by RICECO</i>)
Substituted Ureas	<u>diuron</u> , <u>fluometuron</u> , <u>linuron</u>
Specialty Herbicides	<u>Butoxone 175,200 & 7500</u> ; <u>SuppoRRt</u> ; <u>Sutan (butylate)</u> ; <u>RoNeet(cycloate)</u> ; <u>Tillam (pebulate)</u> ; <u>Eradicane (EPTC)</u>
Crop Safeners	<u>dichlormid</u> , <u>dahemid</u>
Dinitroaniline	<u>pendimethalin</u>

RAW MATERIAL RECEIVING RECORD № 17930

CEDAR CHEMICAL 9000-1 REV: C

TIME IN AT GATE
0925

RECEIVED BY
C. Robinson

SECTION 1

DATE	ORDER NO.	CAR OR TRUCK NO.	DECLARED WEIGHT
<i>10/19/00</i>		<i>13303</i>	Net <i>35274</i>

SHIPPER	CARRIER
<i>P & O Nedlloyd</i>	<i>ACME 35274</i>

QUANTITY	CONTAINER	DESTINATION	RAW MAT CODE #	DESCRIPTION
<i>80 80</i>	<i>B/T</i>	<i>W/H</i>	<i>NA</i>	<i>CDM</i>

COMMENTS
200kg each. NO C & H is needed

SECTION 2

RECIPIENT	TIME SAMPLE/CERTIFICATE TAKEN TO LAB
<i>Bennett</i>	<i>9:45</i>

UNLOADED AT (tank number, unit, warehouse, etc.)
80 Drum

COMMENTS
CYCLOPAN -1- DICARBONSAEURE - Dimezahlbest.

SECTION 3

LAB TECHNICIAN	ACCEPT	REJECT	REASON FOR REJECTION

COMMENTS

SECTION 4

SHIFT SUPERVISOR	ACCEPT	REJECT	REASON FOR REJECTION

PLANT WEIGHT	UNLOADING TIMES	
NET	START TIME	END TIME

COMMENTS

Container Transportation, Inc
Houston Branch

Work Order No
H26820

Order Date
10/24/2000

Customer B/L No
POCLHMB04025

STRAIGHT BILL OF LADING
ORIGINAL - NOT NEGOTIABLE

Shipper:

P&O
C/O BCT
LA PORTE TX

Consignee:

CEDER CHEMICALS
49 PHILLIPS RD 311
HELENA AR

	Description	Weight	
20	POCU0368360 SAID TO CONTAIN: CHEMICALS SEAL # _____ NOT RESPONSIBLE FOR CLAIMS AFTER 48 HOURS NOT RESPONSIBLE FOR CONCEALED DAMAGE	39,000	

COD \$

PREPAID:

COLLECT:

Consignee:

PRINT FULL NAME

Signature:

Time In: _____ Drop: _____
Driver No: 128 Date: _____ Time Out: _____ Leave: _____

If the above mentioned container and applicable chassis are dropped, the condition of the equipment will be deemed good unless otherwise noted hereon, and the equipment becomes the responsibility of the consignee shown above. Any damage, theft or vandalism to said equipment or any component thereof will be the responsibility of the consignee.

RAW MATERIAL RECEIVING RECORD № 17955

CEDAR CHEMICAL 9000-1 REV: C

TIME IN AT GATE
0745

RECEIVED BY
T. S. A. I. U.

SECTION 1

DATE	ORDER NO	CAR OR TRUCK NO	DECLARED WEIGHT
10/25/00	N/A	POC U0348360	Net 39,000

SHIPPER	CARRIER
P&O	Container Transportation

QUANTITY	CONTAINER	DESTINATION	RAW MAT CODE #	DESCRIPTION
20	20 footer	W/H	N/A	CDPm
80 pms	container	SEE CTS		

COMMENTS
SEE Bill of Lading 200kg Drums

SECTION 2

RECIPIENT	TIME SAMPLE/CERTIFICATE TAKEN TO LAB
	0930

UNLOADED AT (tank number, unit, warehouse, etc.)

COMMENTS

SECTION 3

LAB TECHNICIAN	ACCEPT	REJECT	REASON FOR REJECTION

COMMENTS

SECTION 4

SHIFT SUPERVISOR	ACCEPT	REJECT	REASON FOR REJECTION

PLANT WEIGHT	UNLOADING TIMES	
NET 35,274	START TIME	END TIME

COMMENTS

Container Transportation, Inc
Houston Branch

Work Order No
H26942

Order Date
10/24/2000

Customer B/L No
POCLHMB04025

STRAIGHT BILL OF LADING
ORIGINAL - NOT NEGOTIABLE

Shipper:

P&O
C/O BCT
LA PORTE TX

Consignee:

CEDER CHEMICALS
49 PHILLIPS RD 311
HELENA AR

	Description	Weight	
20	POCU0530131 SAID TO CONTAIN: CHEMICALS SEAL # <u>1561838</u> NOT RESPONSIBLE FOR CLAIMS AFTER 48 HOURS NOT RESPONSIBLE FOR CONCEALED DAMAGE	44,000	

COD \$

PREPAID:

COLLECT:

Consignee:

Benni Forester

PRINT FULL NAME

Signature:

Benni Forester

Time In: _____

Drop: _____

Driver No: _____

348

Date: _____

Time Out: _____

Leave: _____

If the above mentioned container and applicable chassis are dropped, the condition of the equipment will be deemed good unless otherwise noted hereon, and the equipment becomes the responsibility of the consignee shown above. Any damage, theft or vandalism to said equipment or any component thereof will be the responsibility of the consignee.

RAW MATERIAL RECEIVING RECORD

№ 17957

CEDAR CHEMICAL 9000-1 REV: C

TIME IN AT GATE

0710

RECEIVED BY

T. SAIO

SECTION 1

DATE	ORDER NO	CAR OR TRUCK NO	DECLARED WEIGHT
10-26-00	N/A	POCV0530131	Net 44000

SHIPPER

PEO

CARRIER

PEO Container Transport

QUANTITY	CONTAINER	DESTINATION	RAW MAT CODE #	DESCRIPTION
80	20 footer container	w/lt	N/A	CDPM

COMMENTS

SEE Bills

200kg Drums

SECTION 2

RECIPIENT	TIME SAMPLE/CERTIFICATE TAKEN TO LAB
Berni Fonz	7:30

UNLOADED AT (tank number, unit, warehouse, etc.)

COMMENTS

CYCL - Discard

SECTION 3

LAB TECHNICIAN	ACCEPT	REJECT	REASON FOR REJECTION

COMMENTS

SECTION 4

SHIFT SUPERVISOR	ACCEPT	REJECT	REASON FOR REJECTION

PLANT WEIGHT

NET 35.274

UNLOADING TIMES

START TIME

END TIME

COMMENTS

This is to certify that the herein stated contents are properly classified, described, packaged, marked and labeled and are in proper condition for transportation according to the applicable regulations of the Department of Transportation.

This Memorandum is an acknowledgement that a Bill of Lading has been issued and is not the Original Bill of Lading, nor a copy or duplicate, covering the property named herein, and is intended solely for filing or record.

INTERMODAL CARTAGE CO., INC.
5707 Holmes Rd., Memphis, TN 38141

Shipper No _____

Carrier No 1111

Date 11/11/80

IMC

(Name of Carrier) (SCAC)

TO: Consignee W. J. ... FROM: Shipper ...
On Collect on Delivery shipments the initials C.O.D. must appear before consignee's name -- or as otherwise provided in Item 430 Sec 1
 Street ... Street ...
 Destination ... Zip Code ... Origin ... Zip Code ...

Route		Vehicle Number			
No Shipping Units	MM	Kind of Packaging, Description of Articles, Special Marks and Exceptions	Weight (Subject to Correction)	RATE	CHARGES
1		<i>...</i>			
		<i>...</i>			

REMIT C.O.D. TO: ADDRESS _____
 Note - Where the rate is dependent on value, shippers are required to state specifically in writing the agreed or declared value of the property.
 The agreed or declared value of the property is hereby specifically stated by the shipper to be not exceeding \$ _____ PER _____
 COD Amt: \$ _____
 C.O.D. FEE: PREPAID COLLECT
 TOTAL CHARGES: \$ _____
 FREIGHT METHOD:
 (Signature of Consignor)

RECEIVED, subject to the classifications and lawfully tied tariffs in effect on the date of the issue of this Bill of Lading, the property described above in apparent good order, except as noted (contents and condition of contents of packages unknown), marked, consigned, and destined as indicated above which said carrier (the word carrier being understood throughout this contract as meaning any person or corporation in possession of the property under the contract) agrees to carry to its usual place of delivery at said destination, if on its route, otherwise to deliver to another carrier on the route to said destination. It is mutually agreed as to each carrier of all or any of, said property over all or any portion of said route to destination and as to each party at any time interested in all or any of said property, that every service to be performed hereunder shall be subject to all the bill of lading terms and conditions in the governing classification on the date of shipment.
 Shipper hereby certifies that he is familiar with all the bill of lading terms and conditions in the governing classification and the said terms and conditions are hereby agreed to by the shipper and accepted for himself and his assigns.

SHIPPER _____ CARRIER ...
 PER _____ PER ...
 EMERGENCY RESPONSE TELEPHONE NUMBER _____ DATE ...

* Mark with "X" to designate Hazardous Material as defined in Title 49 of the Code of Federal Regulations Monitored at all times the Hazardous Material is in transportation including storage incidental to transportation (1 72 604).

3

RAW MATERIAL RECEIVING RECORD

No 17960

CEDAR CHEMICAL 9000-1 REV: C

TIME IN AT GATE
0730

RECEIVED BY
TSAIU

SECTION 1

DATE	ORDER NO	CAR OR TRUCK NO	DECLARED WEIGHT
10-26-00	N/A	POCU 0492725	Net N/A

SHIPPER	CARRIER
P & O Container	IMC Intermodal

QUANTITY	CONTAINER	DESTINATION	RAW MAT CODE #	DESCRIPTION
(100)	20-footer	W/H	N/A	C.D.P.M

COMMENTS
SEE BILLS 200 kg Dums

SECTION 2

RECIPIENT	TIME/SAMPLE/CERTIFICATE TAKEN TO LAB
Bennis Ford	7:45

UNLOADED AT (tank number, unit, warehouse, etc.)

COMMENTS
60 DUNS CYCL - DICAR LESTER (NO FRAGMENT)

SECTION 3

LAB TECHNICIAN	ACCEPT	REJECT	REASON FOR REJECTION

COMMENTS

SECTION 4

SHIFT SUPERVISOR	ACCEPT	REJECT	REASON FOR REJECTION

PLANT WEIGHT	UNLOADING TIMES	
NET 26.455	START TIME	END TIME

COMMENTS

LSF Transportation Inc.

1334 Field Street • Hammond, IN 46320
Tel: 773-974-6082 • Fax: 773-974-6082

SERVING "CHICAGOLAND" WITH COMPLETE LTL & TL SERVICE
ALSO FULL TRUCKLOAD COVERAGE IN
ILLINOIS, INDIANA, MICHIGAN, WISCONSIN, MISSOURI, OHIO

REMITTANCE COPY

DATE SHIPPED 10/15/00	REFERENCE NO. 101184475	TRAILER 98164	ORIGIN IL	DEST. AR	ACCOUNT RPA50N	BILLING DATE 10/17/00	PRO NO. 50718
--------------------------	----------------------------	------------------	--------------	-------------	-------------------	--------------------------	------------------

0206-0206
01-0-0-0

AVENTIS CRUP SCIENCE
C/O ~~HELENA AR 72342~~
HELENA AR 72342
870-572-3701

CEGAR Chemical Corp
49 Phillips Rd #311
SR

PO# CFSU1068796

SUD LINE EAST YARD
9665 WEST LAWRENCE AVE
SCHILLER PARK IL 60176

BILL TO
RHONE POULENC AG
C/O FIS FREIGHT PAYMENT
PO BOX 1259
SOMERVILLE NJ 08876

PIECES	DESCRIPTION OF ARTICLES	WEIGHT	RATE	CHARGES
75	DICHLORANILINE IN CASE OF EMERGENCY CALL CHEMTREC 1-800-424-9300 SPILL, FIRE, ACID, EXPOSURE HAZARDOUS CLASS: DICHLORANILINE SOLIDS; CLASS 6.1 UNCLTD; PGII CONT#CFSU1068796 20 PONE4030 ROW=4 LFD:10/20/00 FUEL SURCHARGE	16,500 LBS		
75	THANK YOU FOR SHIPPING WITH LSF			
	TOTALS	16,500 LBS		10-21-00

Freight charges due and payable within seven days after delivery of shipment.

MC 240911 US DOT 480588 FED. ID 95-1823886 SCAT CODE LSFR

mid

Craig 919-549-2200

RAW MATERIAL RECEIVING RECORD

No 18099

CEDAR CHEMICAL 9000-1 REV: C

TIME IN AT GATE

RECEIVED BY

SECTION 1

DATE ORDER NO. CAR OR TRUCK NO. DECLARED WEIGHT

1-30-01 OCLU082959-3 Net

SHIPPER
P & O NEDLOYD

CARRIER
INTERMODAL

QUANTITY	CONTAINER	DESTINATION	RAW MAT CODE #	DESCRIPTION
76		W/H	---	CPDM
200kg Drums				

COMMENTS

SECTION 2

RECIPIENT TIME SAMPLE/CERTIFICATE TAKEN TO LAB

UNLOADED AT (tank number, unit, warehouse, etc.)

COMMENTS

SECTION 3

LAB TECHNICIAN ACCEPT REJECT REASON FOR REJECTION

COMMENTS

SECTION 4

SHIFT SUPERVISOR ACCEPT REJECT REASON FOR REJECTION

PLANT WEIGHT UNLOADING TIMES

NET 33,510 START TIME END TIME

COMMENTS

Use this form for all shipments of property in motor vehicles, except as otherwise provided and marked on the form, and in accordance with the applicable regulations of the Department of Transportation.

This Shipping Order must be legibly filled in, in Ink, in Indelible Pencil, or in Carbon, and retained by the Agent

ERMODAL CARTAGE CO., INC.
5707 Holmes Rd., Memphis, TN 38141

Shipper No 4-53786
Carrier No _____
Date 1-30-01

IMC
(Name of Carrier)

(ISCAC)

TO Consignee <u>Cedar Chemicals</u>	FROM: Shipper <u>Common User Gate</u>
Street _____	Street _____
Destination <u>Helena Ar</u> Zip Code _____	Origin <u>Mt. Pleasant Sc</u> Zip Code _____

No. Shipping Units	HM	Kind of Packaging Description of Articles Special Marks and Exceptions	Weight (Subject to Correction)	RATE	CHARGES
1		<u>Load</u> <u>CPDM</u> <u>200kg Drums</u> <u>33,510lbs</u>			
		<u>BLU092959-7</u>			
		<u>Seal 700511</u>			

(7600) CYCLOPROPAN DICA

REMIT COD TO ADDRESS	COD Amt. \$ _____	COD FEE: PREPAID <input type="checkbox"/> \$ COLLECT <input type="checkbox"/> \$
Note - Where the rate is dependent on value, shippers are required to state specifically in writing the agreed or declared value of the property. The agreed or declared value of the property is hereby specifically stated by the shipper to be not exceeding \$ _____ per _____	Subject to Section 7 of the conditions, if the shipment is to be delivered to the consignee without recourse to the carrier, the carrier shall sign the following statement: The carrier shall not make delivery of the shipment without payment of freight and all other lawful charges.	TOTAL CHARGES: \$ _____

RECEIVED, subject to the classifications and lawfully filed tariffs in effect on the date of the issue of this Bill of Lading, the property described above in apparent good order, except as noted (contents and condition of contents of packages unknown), marked consigned, and destined as indicated above which said carrier (the word carrier being understood throughout this contract as meaning any person or corporation in possession of the property under the contract) agrees to carry to its usual place of delivery at said destination, if on its route, otherwise to deliver to another carrier on the route to said destination if it is mutually agreed as to each carrier of all or any of, said property over all or any portion of said route to destination and as to each party at any time interested in all or any of said property, that every service to be performed hereunder shall be subject to all the bill of lading terms and conditions in the governing classification on the date of shipment.
Shipper hereby certifies that he is familiar with all the bill of lading terms and conditions in the governing classification and the said terms and conditions are hereby agreed to by the shipper and accepted for himself and his assigns.

SHIPPER	CARRIER <u>IMC</u>
PER <u>Bennie Foster</u>	PER <u>Alex Turner</u>
EMERGENCY RESPONSE TELEPHONE NUMBER _____	DATE <u>1-30-01</u>

2

* Mark with 'X' to designate Hazardous Material as defined in Title 49 of the Code of Federal Regulations Monitored at all times the Hazardous Material is in transportation including storage incidental to transportation (172 604)

RAW MATERIAL RECEIVING RECORD No 18384

CEDAR CHEMICAL 9000-1 REV: C

TIME IN AT GATE
08:30

RECEIVED BY
[Signature]

SECTION 1

DATE	ORDER NO.	CAR OR TRUCK NO.	DECLARED WEIGHT
2/26-01	AVENTIS	0CLU0904465	Net 37487

SHIPPER	CARRIER
---------	---------

QUANTITY	CONTAINER	DESTINATION	RAW MAT CODE #	DESCRIPTION
LOAD	B/T	WAREHOUSE	Chemicals CDPM	CHEMICALS INORGANIC

COMMENTS
See Bill

SECTION 2

RECIPIENT	TIME SAMPLE/CERTIFICATE TAKEN TO LAB
Benni Jones	8:45

UNLOADED AT (tank number, unit, warehouse, etc.)
[Signature]

COMMENTS

SECTION 3

LAB TECHNICIAN	ACCEPT	REJECT	REASON FOR REJECTION

COMMENTS

SECTION 4

SHIFT SUPERVISOR	ACCEPT	REJECT	REASON FOR REJECTION

PLANT WEIGHT	UNLOADING TIMES	
NET	START TIME	END TIME

COMMENTS

DELIVERY



ORDER

P&O



KAYE POWELL

P & O NEDLLOYD
3875 Faber Place Drive
Suite 200

KAYE POWELL
PHONE: 843-566-7400
FAX: (843) 747-8238

North Charleston
SC 29405

DATE: 23 FEB 2001

TO: xcalibur/
ATTN: kerri
FAX: 843-971-9199

PLEASE SEE DELIVERY INFORMATION BELOW AND ARRANGE AS INDICATED.
ANY PROBLEMS OR QUESTIONS, PLEASE CONTACT ME IMMEDIATELY.
PLEASE NOTE RATE SHOWN BELOW. ANY DIFFERENCE MUST BE APPROVED
PRIOR TO INVOICING.

B/L #/COMMODITY	CONTAINER#	SE/TY WEIGHT(LBS)	HAE	TRMP
POCLHMK105250143 CHEMICALS INORGANIC NOS	OCU0904465	20/GP 37487 000000		N

VESSEL CONTAINER(S) LOCATION
MVT1256 WANDO COMMON

CUSTOMS L.F.D./PICKUP#
1C

DELIVERY ADDRESS:

Benni Toke

CEDAR CHEMICAL
49 PHILLIPS RD #311
BELENA, AR 72342 870-572-3701- LISA WALKER X249

REMARKS:

del mon 2/26 1pm

RAW MATERIAL RECEIVING RECORD No 18030

CEDAR CHEMICAL 9000-1 REV: C

TIME IN AT GATE
0850

RECEIVED BY
T.S.

SECTION 1

DATE ORDER NO CAR OR TRUCK NO DECLARED WEIGHT

11/22/00 N/A CRXV 8521507 Net 19,920

SHIPPER
Creanova

CARRIER
Gulf States

QUANTITY	CONTAINER	DESTINATION	RAW MAT CODE #	DESCRIPTION
1 COA	S/C	Unit (5)	N/A	Sodium Methylate

COMMENTS
C of A is present

SECTION 2

RECIPIENT TIME SAMPLE/CERTIFICATE TAKEN TO LAB

M. Thomas 0922

UNLOADED AT (tank number, unit, warehouse, etc.)

T-5213 UNIT 5

COMMENTS

SECTION 3

LAB TECHNICIAN ACCEPT REJECT REASON FOR REJECTION

JH

COMMENTS
NO COA For this trailer Number

SECTION 4

SHIFT SUPERVISOR ACCEPT REJECT REASON FOR REJECTION

[Signature]

PLANT WEIGHT UNLOADING TIMES

NET **44100** START TIME **1030** END TIME

COMMENTS
PO number matches - OK to offload



BDP INTERNATIONAL, INC.

147-31 176TH Street

Jamaica, NY. 11434

(718) 244-1300 FAX#: (718) 244-6866

BILL OF LADING FOR MOTOR CAR

Del To Ref# 5358260

Non-Net

RECEIVED, subject to the terms and conditions on the reverse hereof, the property described below, in apparent good order except as noted (contents and of contents of packages unknown), marked, consigned, and destined as shown below. This Bill of Lading is not subject to any tariffs or classifications what-ally determined or filed with any federal or state regulatory agency, except as specifically agreed to in writing by the shipper and the carrier.

IF CHARGES ARE TO BE PREPAID, WRITE OR STAMP HERE, TO BE PREPAID. DATE: 2000/10/19 OUR REF NO: A07311628-001 CUSTOMERS ORDER NO: 5358260

SHIPPER: CREAMOVA INC. 220 DAVIDSON AVENUE IMPORTING CARRIER: LYKES BROS STEAMSHIP LYKES NAVIGATOR NASHVILLE AVE WHARF NEW ORLEANS 10/23/00

BL NO: LYKLHAMB0722401 PORT OF ORIGIN AIRPORT: ANTWERP

SUBJECT, NO: GULF STATES INTERMODAL (FOR TABY) HOUSE-GUB HOUSE: ENTRY NR: 9160546

DELIVER CONIGNED TO: CEDAR CHEMICAL 49 PHILLIPS RD #311 HELENA AR 72342 (919)-549-2100 CONTACT DAVE LINHERDT ROUTE:

NO. OF PKGS	HM	DESCRIPTION OF ARTICLES, SPECIAL MARKS & EXCEPTIONS	WEIGHT
MUST BE INCLUDED IN ALL DELIVERY INSTRUCTIONS. IF THAT IS NOT POSSIBLE, A COPY OF THIS DELIVERY ORDER MUST ACCOMPANY FREIGHT TO FINAL DESTINATION. IF THERE ARE ANY PROBLEMS PLEASE CONTACT THE UNDERSIGNED IMMEDIATELY. *****MUST CALL FOR A DELIVERY APPT.*****			
TOTALS:	1	44004.26 LBS.	19960.00 KGS.

I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are checked, packaged, marked and labeled in accordance with all applicable international and national governmental regulations.

Per _____ Shipper

Subject to Section 7 of the Terms and Conditions, if the shipment is to be delivered to the consignee without recourse on the consignment, the consignee shall sign the following statement: the carrier shall not make delivery of this shipment without payment of freight and all other lawful charges.

(Signature of consignee)

EMERGENCY RESPONSE INFORMATION DISPLAYED EQUIPMENT IS PROPERLY PLACED OPERATOR HAS DOT EMERGENCY RESPONSE GUIDE BOOK

Carrier's liability is for actual loss unless otherwise stated below. The agreed or declared value of the property is hereby specifically stated by the shipper to be not exceeding \$ _____ per pound. The value is hereby declared to be \$ _____

Shipper per _____

FOR CHEMICAL EMERGENCY SPILL, LEAK, FIRE, EXPOSURE, OR ACCIDENT (800) 424-7300

BDP INTERNATIONAL, INC. - AS AGENT BRIDGET FLOOD (718) 244-1300



DELIVERY



ORDER



P & O NEDLLOYD
 P&O Nedlloyd
 1225 North Loop
 4th Floor - Suite 420
 Houston
 TX 77008

ALEX FARGARSON
 ALEX FARGARSON
 PHONE: 713-880-0900
 FAX: 7138802608

DATE: 18OCT2000

TO: ACME TRUCK LINE/AOP
 ATTN: Dave
 FAX: 281-842-7577

PLEASE SEE DELIVERY INFORMATION BELOW AND ARRANGE AS INDICATED.
 ANY PROBLEMS OR QUESTIONS, PLEASE CONTACT ME IMMEDIATELY.
 PLEASE NOTE RATE SHOWN BELOW. ANY DIFFERENCE MUST BE APPROVED
 PRIOR TO INVOICING.

3/L #/COMMODITY	CONTAINER#	SZ/TY WEIGHT(LBS)	HAZ	TEMP
POCLHMB040253097	GSTU2809915	20/GP 43527	N	
CHEMICALS ORGANIC NOS		000000		

VESSEL CONTAINER(S) LOCATION

 UK0101 BC

CUSTOMS L.F.D./PICKUP#

 RELEASED

DELIVERY ADDRESS:

 EDAR CHEMICAL
 9 PHILLIPS RD #311
 ELENA, AR
 19-549-2100 DAVE LINHERDT

Signature: Bennis Fads

Date: 10-19-00

REMARKS:

RAW MATERIAL RECEIVING RECORD

№ 18063

CEDAR CHEMICAL 9000-1 REV: C

TIME IN AT GATE
1620

RECEIVED BY
C. Robinson

SECTION 1

DATE: 12-5-00 ORDER NO: Arentis CAR OR TRUCK NO: Tm24-223002-1 DECLARED WEIGHT: Net

SHIPPER: *Cresanova* CARRIER: *Gulf States*

QUANTITY	CONTAINER	DESTINATION	RAW MAT CODE #	DESCRIPTION
<i>1-load</i>	<i>S/C</i>	<i>unit-5</i>	<i>NA</i>	<i>Sodium Methylate</i>

COMMENTS
C of A is in Lab

SECTION 2

RECIPIENT: *[Signature]* TIME SAMPLE/CERTIFICATE TAKEN TO LAB:

UNLOADED AT (tank number, unit, warehouse, etc.):
T-5213

COMMENTS

SECTION 3

LAB TECHNICIAN: *[Signature]* ACCEPT: REJECT: REASON FOR REJECTION:

COMMENTS

SECTION 4

SHIFT SUPERVISOR: *[Signature]* ACCEPT: REJECT: REASON FOR REJECTION:

PLANT WEIGHT: *40640* UNLOADING TIMES: START TIME: *17:40* END TIME: *20:20*

COMMENTS

WEIGHED ON A FAIRBANKS SCALE

DATE 12/5/00

CUSTOMERS NAME CREANOVA / Taby America Inc

ADDRESS _____

COMMODITY Sodium Methy/ate Solution

CARRIER Gulf STATE 37/Tmlu223002-1

REMARKS
77280 04:25PM DE 05 00

77280 04:25PM DE 05 00

~~36640~~ 08:26PM DE 05 00

40640

FAIRBANKS SCALE CAT. 083908

LBS. GROSS _____
LBS. TARE - DRIVER ON _____ OFF _____
LBS. NET @ _____ PER LB. PRICE _____

SHIPPER _____

WEIGHER _____

FRIGHT DELIVERY CONTAINER

Taby America Inc.
1150 Raritan Road
Cranford, NJ 07016
Tel: 908-931-1700 Fax 908-931-1002

Date: October 16, 2000

To: Gulf States Marine Terminal
Attn: Dispatch/ Jeanine
From: Bob Hermiston

Delivery order for Taby America owned tankcontainer. Trucking to be billed to Taby America Inc.
REF.#42.1147 must be included on all invoices.

CONTAINER NUMBER: TMLU 223002-1

NET WEIGHT: 18,620 KGS

PRODUCT: SODIUM METHYLATE SOLUTION
IMDG 3.3 UN 1993 FLPT +27C

ORDER#: 0030228584 / PO# 616572

EX-VESSEL: LYKES EXPLORER / LYKES

ETA/PORT: 10/14/00 - NEW ORLEANS

BL: HAMB0722301

PICKUP PRIOR TO EXPIRATION TO FREE TIME:
BROKER (WILL SEND PAPER WORK):

CONSIGNEE: CEDAR CHEMICAL
49 PHILLIPS RD #311
HELENA, AR 72342

DATE: TBA
TIME:

CONTACT: LISA WALKER
TELEPHONE: 870-572-3701 EXT 249

TECHNICAL REQUIREMENTS, PLEASE CHECK WITH CONSIGNEE: Please pick-up the tank from pier on Friday October 20 and bring it back to Gulf States for loaded ground storage. Tank must scale heavy and light. Please call plant for offloading requirements.

CLEAN AT: GULF STATES

DROP EMPTY AT: GULF STATES

Driver is responsible to ensure Tankcontainers is properly placarded, stenciled, and labeled per CFR and IMDG regulations. Any questions or problems please contact the undersigned as soon as possible. Any additional charges such as drivers detention or extra trucking must be advised to Taby America immediately.

Regards
Bob Hermiston
Import Operations

PASSWORD:
MAY

B-5
10/20
HOWARD

1 FN 10/20
AB0000028901

GULF STATES INTERNATIONAL, INC

7300 N. PETERS

ARABI, LA. 70032

FAK(SBA) 277-0113

(SBA) 279-8544

BILL TO: TADY AMERICA, INC.

REFERENCE #: 42.1147

REFERENCE #2:

TANK # 1: TALLI 223022 (1) TANK # 2:

WORK ORDER #: 136253

CHASSIS #: 300882 CHASSIS #2:

DRIVER #1: L.B. POOLE DRIVER #2:

PICK UP TANK AT: GULF STATES MARINE TERMINAL, ARABI, LA.

UNLOAD TANK AT: CEDAR CHEMICALS, WEST HELENA, AR.

DELIVER TANK TO: GULF STATES MARINE TERMINAL, ARABI, LA.

SPECIAL:

CHECK TANK IN FOR: TADY

BOOKING:

CUT OFF DATE & TIME:

VESSEL:

SS LINE:

FEED:

APPOINTMENT DATE: 12-05-2000

APPOINTMENT TIME: 4:00 PM

PLANT ARRIVAL TIME: 4:00 PM

PLANT EXIT TIME: 8:30 PM

TOTAL DETENTION TIME: 0

GROSS WEIGHT: TARE: NET: 0

PRODUCT INFO: SEE PAPERWORK

SPECIAL INSTRUCTIONS: ORDER# 0930228504/616572

This is to certify that the articles above are properly described, packed, and marked according to DOT regulations.

Driver's Signature _____

RECEIVED IN GOOD CONDITION EXCEPT AS NOTED.

CONSIGNEE'S SIGNATURE

Handwritten signature

AB0000028901

Craig Dodson @ Avents, Conn

RAW MATERIAL RECEIVING RECORD

No 18115

CEDAR CHEMICAL 9000-1 REV: C

TIME IN AT GATE
0830

RECEIVED BY
JP

SECTION 1

DATE: 01/05/01 ORDER NO: Avents CAR OR TRUCK NO: TCVU252037-6 DECLARED WEIGHT: Net 19,920 43915

SHIPPER
Gulf States

CARRIER
Gulf States

QUANTITY	CONTAINER	DESTINATION	RAW MAT CODE #	DESCRIPTION
one load	C/Cont.	unit 5	NA	Sodium Methylat.

COMMENTS
[Handwritten marks]

SECTION 2

RECIPIENT: J. Burt TIME SAMPLE/CERTIFICATE TAKEN TO LAB: 1030

UNLOADED AT (tank number, unit, warehouse, etc.)
T-5213

COMMENTS

SECTION 3

CAB TECHNICIAN: CT ACCEPT: REJECT: REASON FOR REJECTION:

COMMENTS
No Cop A OK per Jim K.

SECTION 4

SHIFT SUPERVISOR: [Signature] ACCEPT: REJECT: REASON FOR REJECTION:

PLANT WEIGHT: NET UNLOADING TIMES
START TIME: END TIME:

COMMENTS
OK to unload per Jim Kauling

GULF STATES INTERMODAL, INC.
7300 N. PETERS
ARABI, LA. 70032

(504) 279-8544

FAX (504) 277-0113

TABY AMERICA, INC.
42.1172
TANK # 1: TLVU 252037 (6) TANK # 2:
138192
GSIC 300107

CLARENCE P DAGGS
GULF STATES MARINE TERMINAL, ARABI, LA.
UNLOAD CEDAR CHEMICALS, WEST HELENA, ARK.
GULF STATES MARINE TERMINAL, ARABI, LA.
TABY

APPOINTMENT DATE: 01-05-2001 APPOINTMENT TIME: 8:00 am
Sam
78,740 @ 35,800 = 42,920
SEE PAPERWORK

ORDER# 0034 37616572

This is to certify that the articles above are properly described, packed,
and marked according to DOT regulations.

Shipper's Signature _____

RECEIVED IN GOOD CONDITION EXCEPT AS NOTED.

CONSIGNEE'S SIGNATURE *Mac Sullivan* _____

RAW MATERIAL RECEIVING RECORD № 18173

CEDAR CHEMICAL 9000-1 REV: C

TIME IN AT GATE
1140

RECEIVED BY
DL

SECTION 1

DATE **ORDER NO.** **CAR OR TRUCK NO.** **DECLARED WEIGHT**

1/22/01 NA TABU240343-5 Net 43915

SHIPPER **CARRIER**
Oventis Gulf States

QUANTITY	CONTAINER	DESTINATION	RAW MAT CODE #	DESCRIPTION
1	S/c	units	N/A	sodium methacrylate

COMMENTS
no C of A OK to enter per Jim Crivising

SECTION 2

RECIPIENT **TIME SAMPLE/CERTIFICATE TAKEN TO LAB**

D. Janson N/A

UNLOADED AT (tank number, unit, warehouse, etc.)

T-5213 Units

COMMENTS

SECTION 3

LAB TECHNICIAN **ACCEPT** **REJECT** **REASON FOR REJECTION**

COMMENTS

SECTION 4

SHIFT SUPERVISOR **ACCEPT** **REJECT** **REASON FOR REJECTION**

M. Sullivan

PLANT WEIGHT **UNLOADING TIMES**

NET 43,740 **START TIME** **END TIME** 22:10

COMMENTS

OCT. 23. 2000 10:39 AM

NO. 7814 P. 1

TRUCK DELIVERY INSTRUCTIONS

Taby America Inc.
1150 Raritan Road
Cranford, NJ 07016
Tel: 908-931-1700 Fax 908-931-1002

Date: October 23, 2000

To: Gulf States Marine Terminal
Attn: Dispatch/ Jeanine
From: Bob Hermiston

Delivery order for Taby America owned tankcontainer. Trucking to be billed to Taby America Inc.
REF.#42.1172 must be included on all invoices.

CONTAINER NUMBER: TCVU 252037-6
TABU 240343-5

NET WEIGHT: 19,920 KGS
19,920 KGS

PRODUCT: SODIUM METHYLATE SOLUTION

ORDER#: 0030228583+85 / PO# 616572

~~IMDG 3.3 FOR 1999 PLPT 27C~~

3(8) UN 1289 FIPT 27C

EX-VESSEL: GULF BRIDGE / YANG MING

ETA: PORT: 10/20/00 - NEW ORLEANS

BL: T670010654

PICKUP PRIOR TO EXPIRATION TO FREE TIME:
BROKER (WELL SEND PAPER WORK):

CONSIGNEE: CEDAR CHEMICAL
49 PHILLIPS RD #311
HELENA, AR 72342

DATE: TBA
TIME:

CONTACT: LISA WALKER
TELEPHONE: 870-572-3701 EXT 249

TECHNICAL REQUIREMENTS, PLEASE CHECK WITH CONSIGNEE: Please pick-up the tank from pier on Last Free Day and bring it back to Gulf States for loaded ground storage. Tank must scale heavy and light. Please call plant for offloading requirements.

CLEAN AT: GULF STATES

DROP EMPTY AT: GULF STATES

Driver is responsible to ensure Tankcontainers is properly placarded, stenciled, and labeled per CFR and IMDG regulations. Any questions or problems please contact the undersigned as soon as possible. Any additional charges such as drivers detention or extra trucking must be advised to Taby America immediately.

Regards
Bob Hermiston
Import Operations

AB0000028901

GULF STATES INTERMODAL, INC
7300 N. PETERS
ARABI, LA. 70032

(504) 279-8544

FAX (504) 277-0113

BILL TO: TABY AMERICA, INC.

REFERENCE #: 42.1172

REFERENCE #2:

TANK # 1: TABU 240343 [5] TANK # 2:

WORK ORDER #: 139440

CHASSIS #: GSIC 300289

CHASSIS #2:

DRIVER #1: CHESTER L HART DRIVER #2:

PICK UP TANK AT: GULF STATES MARINE TERMINAL, ARABI, LA.

UNLOAD TANK AT: CEDAR CHEMICALS, WEST HELENA, ARK.

DELIVER TANK TO: GULF STATES MARINE TERMINAL, ARABI, LA.

SPECIAL:

CHECK TANK IN FOR: TABY

BOOKING:

OFF DATE & TIME:

VESSEL:

SO LINE:

PO:

APPOINTMENT DATE: 01-22-2001

APPOINTMENT TIME: 10:00 am

PLANT ARRIVAL TIME: 0930

PLANT EXIT TIME: 2215

TOTAL DETENTION TIME: 0 12 hrs 15 min

GROSS WEIGHT: 78740 TARE: 35000 NET: 0 43740

PRODUCT INFO: LOADED TANK/SEE PAPERWORK

SPECIAL INSTRUCTIONS ORDER # 0030228585 PO #616572

This is to certify that the articles above are properly described, packed,
and marked according to DOT regulations.

Shipper's Signature _____

RECEIVED IN GOOD CONDITION EXCEPT AS NOTED.

CONSIGNEE'S SIGNATURE

Mark McBride

RAW MATERIAL RECEIVING RECORD No 18266

CEDAR CHEMICAL 9000-1 REV: C

TIME IN AT GATE
11:00

RECEIVED BY
[Signature]

SECTION 1

DATE	ORDER NO.	CAR OR TRUCK NO.	DECLARED WEIGHT
2-07-01	616572-555660 20364	ICTU 260049-0 1149	Net 20364 44560

SHIPPER	CARRIER
BOASO Taby America	Gulf States BOASO Am. 1444/4

QUANTITY	CONTAINER	DESTINATION	RAW MAT CODE #	DESCRIPTION
20160 Kgs	T/T	UNIT # 5	SODIUM METHYLATE	SODIUM METHYLATE

COMMENTS
NO COFA (Jim Kruslow said to unload.)

SECTION 2

RECIPIENT	TIME SAMPLE/CERTIFICATE TAKEN TO LAB
D. Jackson	1645

UNLOADED AT (tank number, unit, warehouse, etc.)
T-5213

COMMENTS
NONE

SECTION 3

LAB TECHNICIAN	ACCEPT	REJECT	REASON FOR REJECTION
TLP	✓		NO COFA

COMMENTS

SECTION 4

SHIFT SUPERVISOR	ACCEPT	REJECT	REASON FOR REJECTION
<i>[Signature]</i>	✓		

PLANT WEIGHT	UNLOADING TIMES	
NET 44560	START TIME 11300	END TIME 1630

COMMENTS

BOASSO AMERICA HOUSTON
2727 APPELT DRIVE
HOUSTON, TX. 77015

(281) 452-1140

FAX (281) 452-2050

BILL TO: TABY AMERICA INC
REFERENCE #: 42.0006 REFERENCE #2 616572/5556600
TANK # 1: ICTU 260049 [0] TANK # 2:
WORK ORDER # 20364
CHASSIS #:
TH#1149 MUSIC CHASSIS # 2:
DRIVER #1: ~~CAMPBELL~~ DRIVER #2
PICK UP TANK AT: BOASSO AMERICA HOUSTON, TX
UNLOAD TANK AT: CEDAR CHEMICAL, 49 PHILLIPS RD, #311 HELENA, AR
DELIVER TANK TO: BOASSO AMERICA HOUSTON, TX

CHECK TANK IN FOR:

BOOKING: CUT OFF DATE AND TIME:
VESSEL:
SS LINE:
POD:

- 0

APPOINTMENT DATE: 02-07-2001 APPOINTMENT TIME: 8:00 am
PLANT ARRIVAL TIME: PLANT EXIT TIME:
TOTAL DETENTION TIME: 0
GROSS WEIGHT: TARE: NET: 0
PRODUCT INFO: SEE PAPERWORK

SPECIAL INSTRUCTIONS

This is to certify that the articles above are properly described, packed,
and marked according to DOT regulations.

Shipper's Signature _____

RECEIVED IN GOOD CONDITION EXCEPT AS NOTED.

CONSIGNEE'S SIGNATURE Andy Seena

USED TWO FITTINGS
ONE 3 INCH TO 2 INCH
RF NUC EA

AB000028901

RAW MATERIAL RECEIVING RECORD No 18394

CEDAR CHEMICAL 9000-1 REV: C

TIME IN AT GATE
1355

RECEIVED BY
JP

SECTION 1

DATE ORDER NO. CAR OR TRUCK NO. DECLARED WEIGHT

2/27/01 *Qventis* *957-* Net *41.756*

SHIPPER
Qventis

CARRIER
Greenville Trans.

QUANTITY	CONTAINER	DESTINATION	RAW MAT CODE #	DESCRIPTION
<i>one load</i>	<i>C"Cont.</i>	<i>unit 5</i>	<i>NA</i>	<i>Sodium methoxide</i>

COMMENTS
Cof A is waived Per J. Krustling

SECTION 2

RECIPIENT TIME SAMPLE/CERTIFICATE TAKEN TO LAB

UNLOADED AT (tank number, unit, warehouse, etc.)

COMMENTS

SECTION 3

LAB TECHNICIAN ACCEPT REJECT REASON FOR REJECTION

CT

COMMENTS
Per Jim K.

SECTION 4

SHIFT SUPERVISOR ACCEPT REJECT REASON FOR REJECTION

McBaide

PLANT WEIGHT UNLOADING TIMES

NET *41920* START TIME *14:10* END TIME *17:10*

COMMENTS

FEB. 26. 2001 11:33AM

NO. 3146 P. 1/1

ATTN: Ted

only one Tank to be Del. CRXU 852135-9

DELIVERY INSTRUCTIONS

Taby America Inc.
1150 Raritan Road
Cranford, NJ 07016
Tel: 908-931-1700 Fax: 908-931-1002

*Thanks,
Nance*

Date: February 23, 2001

To: Greenville / Attn: Ted
To: Boasso / Attn: Jeanine

Fax: 757-934-1801
Fax: 504-279-0113

BOASSO PLEASE ACCEPT THE FOLLOWING TANKS IN FOR CLEANING ONCE EMPTY.

From: Nance Gonzalez

Delivery order for Taby America owned tank container. Trucking to be billed to Taby America Inc.
REF # 42.0097 must be included on all invoices.

CONTAINER NUMBER: ~~GRXU 852135-9~~
CRXU 852135-9

NET WEIGHT: 18,940 KGS - 41,756 LBS.
18,980 KGS

PRODUCT: SODIUM METHYLATE SOLUTION
IMDG 3.3 UN 1289 (FLPT -29C) PG III
Secondary Hazard Corrosive

CUSTOMER REF: PO 5602090 +
5602180

EX-VESSEL: ALLIGATOR LIBERTY COA.CCA

ETA/PORT: 2-21-01 NORFOLK

PICKUP PRIOR TO EXPIRATION TO FREE TIME.

CALL STEAMSHIP LINE FOR E.I.R. # FOR PICK-UP AT THE PIER

DELIVERY POINT: CEDAR CHEMICAL CORP.
49 PHILLIPS ROAD #311
HELENA, AR 72342

DELIVERY DATE: TUESDAY, FEB. 27
TIME: SOON AS POSSIBLE

CONTACT: LISA WALKER
TELEPHONE: 870-572-3701 EXT.249

TECHNICAL REQUIREMENTS PLEASE CHECK WITH CONSIGNEE: Please deliver the following tanks on Tuesday Feb. 12th in the afternoon.

CLEAN AT: BOASSO

DROP EMPTY AT: BOASSO - NEW ORLEANS
T# 504-279-8544
F# 504-277-0113
ATTN: JEANINE

Driver is responsible to ensure tank containers are properly placarded, stenciled, and labeled per CFR and IMDG regulations. Any questions or problems please contact the undersigned as soon as possible. Any additional charges such as drivers detention or extra trucking must be advised to Taby America immediately.

Best Regards,
Nance Gonzalez

SHIPPER'S CERTIFICATION
THE ABOVE ARTICLES ARE PROPERLY DESCRIBED, PACKED, MARKED AND CONDITIONED FOR TRANSPORTATION ACCORDING TO THE REGULATIONS OF THE INTERSTATE COMMERCE COMMISSION, AND ARE SHIPPED SUBJECT TO THE TARIFFS OF THE CARRIER, OR ITS AGENTS, EFFECTIVE THIS DATE.

RAW MATERIAL RECEIVING RECORD № 17937

CEDAR CHEMICAL 9000-1 REV: C

TIME IN AT GATE
0740

RECEIVED BY
T. Sain

SECTION 1

DATE	ORDER NO	CAR OR TRUCK NO	DECLARED WEIGHT
10/21/00	N/A	98-164	Net 16,500 33069

SHIPPER
Rhone-Powleuc

CARRIER
LSF

QUANTITY	CONTAINER	DESTINATION	RAW MAT CODE #	DESCRIPTION
75 drums	B/T	w/H	N/A	DCA, 2.4

COMMENTS
See Lisa Walker 200^{lb} per each

SECTION 2

RECIPIENT	TIME SAMPLE/CERTIFICATE TAKEN TO LAB
Dan die Franke	07:45

UNLOADED AT (tank number, unit, warehouse, etc.)
Warehouse

COMMENTS
N/A (NO COA)

SECTION 3

LAB TECHNICIAN	ACCEPT	REJECT	REASON FOR REJECTION
PF		✓	

COMMENTS No CoA.
Unit not ready to be certified yet.

SECTION 4

SHIFT SUPERVISOR	ACCEPT	REJECT	REASON FOR REJECTION
J. V. ...	✓		

PLANT WEIGHT	UNLOADING TIMES	
NET	START TIME	END TIME

COMMENTS

RAW MATERIAL RECEIVING RECORD

No 17956

CEDAR CHEMICAL 9000-1 REV: C

TIME IN AT GATE
1100

RECEIVED BY
T.S

SECTION 1

DATE	ORDER NO	CAR OR TRUCK NO	DECLARED WEIGHT
10-25-00	N/A	99-766	Net 16500

SHIPPER	CARRIER
Rhone Poulenc	LSF

QUANTITY	CONTAINER	DESTINATION	RAW MAT CODE #	DESCRIPTION
75 drums	BIT	w/A	N/A	2,4
				DCA

COMMENTS
SEE LISA WALKER 20019 drums

SECTION 2

RECIPIENT	TIME SAMPLE/CERTIFICATE TAKEN TO LAB
	10:50

UNLOADED AT (tank number, unit, warehouse, etc.)

COMMENTS

SECTION 3

LAB TECHNICIAN	ACCEPT	REJECT	REASON FOR REJECTION

COMMENTS

SECTION 4

SHIFT SUPERVISOR	ACCEPT	REJECT	REASON FOR REJECTION

PLANT WEIGHT	UNLOADING TIMES	
NET 33,069	START TIME	END TIME

COMMENTS

ESF Transportation

1884 Field Street
TAMPA, FL 33606
Tel: 813-888-4256 Fax: 813-888-4256

SERVING "CHICAGO LAND" WITH COMPLETE LTL & TL SERVICE
ALSO ALL TRUCKLOAD COVERAGE IN
ILLINOIS, INDIANA, MICHIGAN, WISCONSIN, MISSOURI, OHIO

REMITTANCE COPY

PLEASE SHOW THIS PRO NUMBER
ON ALL INVOICES

DATE SHIPPED	DATE RECEIVED	TRAILER	ORIGIN	DEPT.	ACCOUNT	BILLING DATE	PRO NUMBER
10/19/00	10/19/00	98167	72	AR	RFASONJ	10/19/00	53615

AVENTIS DROP SCIENCE
C/O BLACKHAWK WAREHOUSE & LEAS
407 PHILLIPS 311 ROAD
HELENA AR 72342

PO# CPSU1071634

SB

300 LINE EAST YARD
7665 WEST LAWRENCE AVE
SCHILLER PARK IL 60176

BILL TO

RHONE POULENC AG
C/O FTS FREIGHT PAYMENT
PO BOX 1259
SOMERVILLE NJ 08876

PIECES	DESCRIPTION OF ARTICLES	WEIGHT	RATE	CHARGES
75	DICHLORAN FINE IN CASE OF EMERGENCY CALL CHEMTREC 1-800-424-9300 SPILL, FIRE, ACID, LIQUID, VAPOR, GASES, SOLIDS, GLASS, CONTAINER, HAZARDOUS CLASSIFICATION, PG11 CONT#CPSU1071634 ROW#4 FUEL SURCHARGE	16,500 LBS		
75	THANK YOU FOR SHIPPING WITH LSI Inc.			
	TOTALS	16,500 LBS		

(Freight charges due and payable within seven days after delivery of shipment)

RAW MATERIAL RECEIVING RECORD

No 17964

CEDAR CHEMICAL 9000-1 REV: C

TIME IN AT GATE
1200

RECEIVED BY
T. Sain

SECTION 1

DATE	ORDER NO	CAR OR TRUCK NO	DECLARED WEIGHT
10-26-00	N/A	98-127	Net 16,500

SHIPPER	CARRIER
Rone Poulenc	LSF

QUANTITY	CONTAINER	DESTINATION	RAW MAT CODE #	DESCRIPTION
75	BIT	w/H	N/A	24
		2-4 DCA		DCA
				Draws

COMMENTS
SEE Bills 200kg ea.

SECTION 2

RECIPIENT	TIME SAMPLE/CERTIFICATE TAKEN TO LAB
Bennis 402	12:10

UNLOADED AT (tank number, unit, warehouse, etc.)

COMMENTS

SECTION 3

LAB TECHNICIAN	ACCEPT	REJECT	REASON FOR REJECTION

COMMENTS

SECTION 4

SHIFT SUPERVISOR	ACCEPT	REJECT	REASON FOR REJECTION

PLANT WEIGHT	UNLOADING TIMES	
	START TIME	END TIME
NET 33,069		

COMMENTS

LSF Transportation
 1634 Field Street • Hammond, IN 46320
 Tel IN: 219-933-4252 • Tel IL: 773-374-6082 • Fax 219-933-4256

SERVING "CHICAGOLAND" WITH COMPLETE LTL & TL SERVICE
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 ILLINOIS, INDIANA, MICHIGAN, WISCONSIN, MISSOURI, OHIO

REMITTANCE COPY

PLEASE SHOW THIS PRO NUMBER
 ON RECEIPTS

DATE SHIPPED 10/19/00	REFERENCE/B/L 101184475	TRAILER 99690	ORIGIN ZZ	DEST. AR	ACCOUNT RHASONJ	BILLING DATE 10/19/00	PRO NO. 53616
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AVENTIS CROP SCIENCE
 C/O BLACKHAWK WAREHOUSE & LEAS
 407 PHILLIPS 311 ROAD
 HELENA AR 72342

PO# CPSU1055757

SE

0000000000

SQD LINE EAST YARD
 9665 WEST LAWRENCE AVE
 SCHILLER PARK IL 60176

BILL TO

RHONE POULENC AG
 C/O FTS FREIGHT PAYMENT
 PO BOX 1259
 SOMERVILLE NJ 08876

PIECES	DESCRIPTION OF ARTICLES	WEIGHT	RATE	CHARGES
75	DICHLORANILINE IN CASE OF EMERGENCY CALL CHEMTREC 1-800-424-9300 SPILL, FIRE, ACID, VAPOR, EXPOSURE HAZARDOUS CLASS: DICHLORANILINE SOLIDS, CLASS 6.1 CONT#CPSU1055757 ROW#4 LFD:10/20/00 FUEL SURCHARGE	16,500	LBS	
75	THANK YOU FOR SHIPPING WITH LSF!	TOTALS	16,500 LBS	

[Handwritten Signature] 11/4/00

Freight charges due and payable within seven days after delivery of shipment.

MC 240911 US DOT 460588 FED. ID 35-1823688 SCAT CODE LSFR

RAW MATERIAL RECEIVING RECORD No 17984

CEDAR CHEMICAL 9000-1 REV: C

TIME IN AT GATE
0830

RECEIVED BY
JP

SECTION 1

DATE	ORDER NO	CAR OR TRUCK NO	DECLARED NET WT
11/4/00	NA	99690	Net 16,500

SHIPPER	CARRIER
Rhone Paulenc AG	LSF

QUANTITY	CONTAINER	DESTINATION	RAW MAT CODE #	DESCRIPTION
75 Drums	BIT	Warehouse	NA	24 DCA
		for unit #5		

COMMENTS **200kg Drums**

SECTION 2

RECIPIENT	TIME/SAMPLE/CERTIFICATE TAKEN TO LAB
M. Littleton	NA

UNLOADED AT (tank number, unit, warehouse, etc.)
Warehouse

COMMENTS **Good Day!! Co.A to be Faxed**

SECTION 3

LAB TECHNICIAN	ACCEPT	REJECT	REASON FOR REJECTION

COMMENTS

SECTION 4

SHIFT SUPERVISOR	ACCEPT	REJECT	REASON FOR REJECTION
H. Allen	<input checked="" type="checkbox"/>		

PLANT WEIGHT	UNLOADING TIMES	
33,069 NA	START TIME	END TIME
NET	08:45	10:00

COMMENTS **Unloaded @ main warehouse**

RAW MATERIAL RECEIVING RECORD No 18290

CEDAR CHEMICAL 9000-1 REV: C

TIME IN AT GATE
13:00

TTNU 2242341
SECTION 1

RECEIVED BY
[Signature]

DATE	ORDER NO.	CAR OR TRUCK NO.	DECLARED WEIGHT
2/12/01	N/A	53132	Net 36376

SHIPPER	CARRIER
500 Line E <u>AVENTIS</u>	LSF

QUANTITY	CONTAINER	DESTINATION	RAW MAT CODE #	DESCRIPTION
75	B/T	Ware House	N/A	2-4 DCA

COMMENTS
O.K. TO UNLOAD Per Lisa W.

SECTION 2

RECIPIENT	TIME SAMPLE/CERTIFICATE TAKEN TO LAB
F. Clark	1:08

UNLOADED AT (tank number, unit, warehouse etc.)

COMMENTS

SECTION 3

LAB TECHNICIAN	ACCEPT	REJECT	REASON FOR REJECTION

COMMENTS

SECTION 4

SHIFT SUPERVISOR	ACCEPT	REJECT	REASON FOR REJECTION

PLANT WEIGHT	UNLOADING TIMES	
NET 33,069	START TIME	END TIME

COMMENTS

LSF Transportation Inc.

124 Field Street • Hammond, IN 46320
 Tel: 219-933-4252 • Tel IL: 773-374-6082 • Fax: 219-933-4256

SERVING "CHICAGOLAND" WITH COMPLETE LTL & TL SERVICE
 ALSO FULL TRUCKLOAD COVERAGE IN
 ILLINOIS, INDIANA, MICHIGAN, WISCONSIN, MISSOURI, OHIO

REMITTANCE COPY

PLEASE SHOW THIS PRO NUMBER
 ON RECEIPTS

DATE SHIPPED 7/25/00	REFERENCE LORRETT INC	TRAILER 53132	ORIGIN IL	DEST. IN	ACCOUNT RTS/IND	BILLING DATE 7/29/00	PRO NO. 550000
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0020-0020

AVENUE SCIENTIFIC
 4700 LAFAYETTE CHEMICAL TOWN
 47 PHILLIPS RD #211
 MCGRAW HILL 46004

870-572-3701 X249
 HATA
 Level 2341

POST # 1111111111

001-0010

ADD LORRETT EAST TOWN
 105 WEST LAWRENCE AVE
 MCGRAW HILL 46004

BILL TO
 KIMBERLY CLARK
 10000 W. 100TH ST
 PO BOX 10000
 SOMERVILLE IN 46084

PIECES	DESCRIPTION OF ARTICLES	WEIGHT	RATE	CHARGES
75	DIETHYLAMINE, LIQ	365.375	1.15	
	IN CASE OF EMERGENCY CALL...		1.15	
	CHEMICAL 800 724-9300		1.15	
	HAZARDOUS MATERIAL		1.15	
	DIETHYLAMINE, SOLIDS,		1.15	
	UNISO, POLY,		1.15	
	DIETHYLAMINE		1.15	
	DIETHYLAMINE (242-943) LBS 14.00		1.15	
	DIETHYLAMINE MI 10, BLENWAY		1.15	
	DIETHYLAMINE		1.15	
75	<i>3 Clark</i>			
	TOTALS	365.375	1.15	

Freight charges due and payable within seven days after delivery of shipment.

MC 240911 US DOT 460588 FED. ID 35-1823666 SCAT CODE LSFR

RAW MATERIAL RECEIVING RECORD No 18303

CEDAR CHEMICAL 9000-1 REV: C

TIME IN AT GATE 0725	TRLU3539483 SECTION 1	RECEIVED BY JP
--------------------------------	--------------------------	--------------------------

DATE	ORDER NO.	CAR OR TRUCK NO.	DECLARED WEIGHT
2/15/01	55080	511757	Net 36,376

SHIPPER Oventis	CARRIER LSF TRANS.
---------------------------	------------------------------

QUANTITY	CONTAINER	DESTINATION	RAW MAT CODE #	DESCRIPTION
75	BIT	Whse	3010	DC A

COMMENTS

SECTION 2

RECIPIENT	TIME SAMPLE/CERTIFICATE TAKEN TO LAB
J. Clark	7:31

UNLOADED AT (tank number, unit, warehouse etc.)

COMMENTS

SECTION 3

LAB TECHNICIAN	ACCEPT	REJECT	REASON FOR REJECTION

COMMENTS

SECTION 4

SHIFT SUPERVISOR	ACCEPT	REJECT	REASON FOR REJECTION

PLANT WEIGHT	UNLOADING TIMES	
NET	START TIME	END TIME

COMMENTS

LSF Transportation Inc.

1834 Field Street • Hammond, IN 46320
Tel I 919-933-4268 • Tel IL 773-374-6083 • Fax 219-933-4268

SERVING "CHICAGOLAND" WITH COMPLETE LTL & TL SERVICE
ALSO FULL TRUCKLOAD COVERAGE IN
ILLINOIS, INDIANA, MICHIGAN, WISCONSIN, MISSOURI, OHIO

REMITTANCE COPY

PLEASE SHOW THIS PRO NUMBER
ON INVOICE

DATE SHIPPED 2/08/01	REFERENCE # CONT#1RLU3539483	TRAILER 97960	ORIGIN ZZ	DEST. AR	ACCOUNT RFASUNJ	BILLING DATE 2/14/01	PRO NO. 55080
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COMMERCIAL

AVENTIS CROP SCIENCE
C/O LEDAR CHEMICAL CORP
49 PHILLIPS RD #311
HELENA AR 72342

Dec: 2/15/01

PO# REF#101200249

Tel: 870-572-3701

SBX

SHIP TO

500 LINE EAST YARD
9665 WEST LAWRENCE AVE.
SCHILLER PARK IL 60176

BILL TO

RHONE POULENC AG
C/O FTS FREIGHT PAYMENT
PO BOX 1259
SOMERVILLE NJ 08876

PIECES	DESCRIPTION OF ARTICLES	WEIGHT	RATE	CHARGES
75	DICHLORANILINE 2.4 IN CASE OF EMERGENCY CALL... CHEMTREC 800-424-9300 HAZARDOUS MATERIAL USDF; DICHLORANILINE SOLIDS, CLASS 6.1, UN1590 MARINE POLLUTANT CONT#1RLU3539483 PU# 1 FUEL SURCHARGE	36,376	LES LES LES LES LES LES LES LES	
75	<i>Benn Roberts</i>	TOTALS	36,376 LES	

P. Clark

Freight charges due and payable within seven days after delivery of shipment

MC 240911

US DOT 460588

FED. ID 35-1823686

SCAT CODE LSFR

RECEIVED BY

DECLARED WEIGHT

DATE

2/22/61

CARLE 3459064

Net

AVENTIS

CARRIER

LSF

QUANTITY	CONTAINER	DESTINATION	RAW MAT CODE #	DESCRIPTION
75 Dwt @ 200kg.		UNIT 5	N/A	2,4 DCA

COMMENTS

SECTION 2

RECIPIENT	TIME SAMPLE/CERTIFICATE TAKEN TO LAB

UNLOADED AT (tank number, unit, warehouse, etc.)

COMMENTS

SECTION 3

LAB TECHNICIAN	ACCEPT	REJECT	REASON FOR REJECTION

COMMENTS

SECTION 4

SHIFT SUPERVISOR	ACCEPT	REJECT	REASON FOR REJECTION

PLANT WEIGHT	UNLOADING TIMES	
NET 33.069	START TIME	END TIME

COMMENTS

LSI Transportation Inc.
 1334 Field Street • Hammond, IN 46320
 Tel IN: 219-933-4252 • Tel IL: 773-374-6082 • Fax: 219-933-4256

SERVING "CHICAGOLAND" WITH COMPLETE LTL & TL SERVICE
 ALSO FULL TRUCKLOAD COVERAGE IN
 ILLINOIS, INDIANA, MICHIGAN, WISCONSIN, MISSOURI, OHIO

ORIGINAL FREIGHT BILL

PLEASE SHOW THIS PRO NUMBER
 ON RECEIPTS

DATE SHIPPED 2/23/01	REFERENCE # CONT#CAXU2439064	TRAILER 98017	ORIGIN IL	DEST. AR	ACCOUNT RFASONJ	BILLING DATE 2/23/01	PRO NO. 55081
-------------------------	---------------------------------	------------------	--------------	-------------	--------------------	-------------------------	------------------

CONSIGNEE

AVENTIS CROP SCIENCE
 C/O CEDAR CHEMICAL CORP
 49 PHILLIPS RD #311
 HELENA AR 72342

PO# REF#101208249

SBX

SHIP TO

500 LINE EAST YARD
 9665 WEST LAWRENCE AVE
 SCHILLER PARK IL 60176

BILL TO

RHONE POULENC AG
 C/O FTS FREIGHT PAYMENT
 PO BOX 1259
 SOMERVILLE NJ 08876

PIECES	DESCRIPTION OF ARTICLES	WEIGHT	RATE	CHARGES
75	DICHLORANILINE 2.4 IN CASE OF EMERGENCY CALL... CHEMTREC 800-424-9300 HAZARDOUS MATERIAL USDOT; DICHLORANILINE SOLIDS, CLASS 6.1, UN1590, PGII MARINE POLLUTANT CONT#CAXU2439064 LFD; PU# MT TO; GLENWAY FUEL SURCHARGE	35,376	LBS	
			LBS	
75	<i>Berni Inc</i> TOTALS	36,376	LBS	

Freight charges due and payable within seven days after delivery of shipment.

MC 240911 US DOT 480588 FED. ID 35-1823668 SCAT CODE LSFR

RAW MATERIAL RECEIVING RECORD No 18392

CEDAR CHEMICAL 9000-1 REV: C

JP

TIME IN AT GATE
1120

XTRU2014947
SECTION 1

RECEIVED BY
~~JP~~

DATE ORDER NO. CAR OR TRUCK NO. DECLARED WEIGHT

2/27/01 101209701 511757-53132 Net 36,376

SHIPPER **Adventis Crop Science** CARRIER **SF**

QUANTITY	CONTAINER	DESTINATION	RAW MAT CODE #	DESCRIPTION
80	BT	whse	3010	DCA
@ 200kg				

COMMENTS

SECTION 2

RECIPIENT TIME SAMPLE/CERTIFICATE TAKEN TO LAB

J. Clark 11:30

UNLOADED AT (tank number, unit, warehouse, etc.)

COMMENTS

SECTION 3

LAB TECHNICIAN ACCEPT REJECT REASON FOR REJECTION

--	--	--	--

COMMENTS

SECTION 4

SHIFT SUPERVISOR ACCEPT REJECT REASON FOR REJECTION

--	--	--	--

PLANT WEIGHT	UNLOADING TIMES	
NET 35,274	START TIME	END TIME

COMMENTS

RAW MATERIAL RECEIVING RECORD No 18385

CEDAR CHEMICAL 9000-1 REV: C

TIME IN AT GATE
09:15

TEXU2095811
SECTION 1

RECEIVED BY
MO

DATE **ORDER NO** **CAR OR TRUCK NO** **DECLARED WEIGHT**

2/26/01 101209701 97482 Net 36376

SHIPPER

CARRIER

QUANTITY	CONTAINER	DESTINATION	RAW MAT CODE #	DESCRIPTION
1000	B/T	Warehouse	N/A	Dic. Allocation
75-10rs @ 200kg		Unit 5	2.4	DCA

COMMENTS
see Bill

SECTION 2

RECIPIENT **TIME SAMPLE/CERTIFICATE TAKEN TO LAB**

Benni Lopez 9:25

UNLOADED AT (tank number, unit, warehouse, etc.)

COMMENTS

SECTION 3

LAB TECHNICIAN **ACCEPT** **REJECT** **REASON FOR REJECTION**

COMMENTS

SECTION 4

SHIFT SUPERVISOR **ACCEPT** **REJECT** **REASON FOR REJECTION**

PLANT WEIGHT **UNLOADING TIMES**

NET 33,069 **START TIME** **END TIME**

COMMENTS

LSF Transportation Inc.

1534 Field Street • Hammond, IN 46320
 Tel IN: 219-933-4252 • Tel TX: 773-374-6082 • Fax: 219-933-4256

SERVING 'CHICAGOLAND' WITH COMPLETE LTL & TL SERVICE
 ALSO FULL TRUCKLOAD COVERAGE IN
 ILLINOIS, INDIANA, MICHIGAN, WISCONSIN, MISSOURI, OHIO

REMITTANCE COPY

PLEASE SHOW THIS PRO NUMBER ON ALL INVOICES

DATE SHIPPED 2/20/01	REFERENCE/BL CONT# TEXU2095811	TRAILER 99942	ORIGIN AZ	DEST. AK	ACCOUNT KIPASON	BILLING DATE 2/23/01	PRO NO. 59253
-------------------------	-----------------------------------	------------------	--------------	-------------	--------------------	-------------------------	------------------

CONSIGNEE
SHIPPER

AVENTIS CROP SCIENCE
 C/O CEDAR CHEMICAL CORP
 49 PHILLIPS RD #311
 HELENA AR 72342

FOR REF # 10L20703

SIXX

300 LINE EAST YARD
 9665 WEST LAWRENCE AVE
 SCHILLER PARK IL 60176

BILL TO

RHONE FOLENC ALI
 C/O FTS FREIGHT PAYMENT
 PO BOX 1259
 SUMERVILLE NJ 08876

PIECES	DESCRIPTION OF ARTICLES	WEIGHT	RATE	CHARGES
75	DICHLORANILINE 2.4 IN CASE OF EMERGENCY CALL...	36,376 LBS		
	CHEMTREC 800-424-9300	LBS		
	HAZARDOUS MATERIAL	LBS		
30	USDOT; DICHLORANILINE SULFOS, CLASS 6.1, UNISS	LBS		
	MARINE POLLUTANT	LBS		
	CONT# TEXU2095811	LBS		
	PU# E-6090	LBS		
	FUEL SURCHARGE	LBS		
155	TOTALS	36,376 LBS		

Freight charges due and payable within seven days after delivery of shipment.

MC 240911 US DOT 460588 FED. ID 35-1823668 SCAT CODE L8FR

IP4

PRINT DATE 12/14/00 TIME 11:47:36

MEMPHIS, TN RICECO, LLC

ORDER DATER ORDER NUMBER

** SHIPPING ORDER **

11/03/00 3110

SOLD TO: AVENTIS CROPSCIENCE LTD 127/22-23 PANJATHANI TWR 17TH FLOOR NONSEE ROAD CHONGNANSEE, YANNAWA BANGKOK THAILAND 10120

REQ DELV DATE: 2/01/01 REQ SHIP DATE: 12/22/00

K. PAKORN

662-681-1125

SHIP TO: AVENTIS CROPSCIENCE (THAI) FL.17-18 PANJATHANI TOWER 127/22-23 NONSEE RD. CHONGNONSEE YANNAWA BANGKOK THAILAND 10120

=====
CUST. NO. CUST ORDER NO. SALESMAN FRT. PPD/COL
6000-00 22100020 R. VEGA PREPAID
=====

SHIPPED FROM FOB POINT SHIP VIA TERMS
WEST HELENA PLANT CIF BANGKOK COMMON CARRIER 30 DAYS

QTY CONTAINER ITEM
ORDERED SIZE NUMBER DESCRIPTION
=====

760 BAG 03060 FLAKE TECH 25 KG
E 19,000 KG OF PROPANIL TECHNICAL 97% IN 25 KG BAGS
E CIF BANGKOK
E ITEM NO: CNRAPRO95421
I MARKS: AVENTIS
I PROPANIL TECH
I BCL-221-00-020
I BATCH/LOT NO....
I BANGKOK
I LABELS: RICECO PROPANIL TECH (GENERAL LABELS)
I DARK COLOR MATERIAL REQUESTED

SHIP 12-19 8AM

*OK
LW
12.14
~~SHIP 12.20~~
red dot required*

GILSCOT GUIDROZ INTERNATIONAL INC
 201 EVANS ROAD, SUITE 333
 NEW ORLEANS, LA. 70123
 PHONE: 504 731 1997 FAX: 1998
 EMAIL: GILSCOT@BELLSOUTH.NET

BOOKING CONFIRMATION

DATE: 12-13-00

ATTN: RAFAEL VEGA, APRIL CARDENAS
 CC: LISA WALKER CED AR

SHIPPER: RICECO
 ORDER NO.: 3110
 BOOKING NO. OWS1082620
 PC. & WT: 1 X 40' FCL
 COMMODITY: HERBICIDES NON HAZD
 VESSEL: OOCL CALIFORNIA V.0476
 CUTOFF DATE: 12-21
 EST. SAIL DATE: 1-3
 EST. E.T.A.: 1-27
 STEAMSHIP LINE: P&O/OWL
 PLACE RECEIPT: MARION AR
 PORT OF LOADING: LONG BEACH, CA.
 DESTINATION PORT: BANGKOK, THAILAND
 RATE: \$1925.00
 DELIVERY ADDRESS: GILSCOT C/O P&O C/O
 U.P. RR., MARION AR

NOTES:

Good

*Change
 12/13/00*

STRAIGHT BILL OF LADING - SHORT FORM - Original - Not Negotiable

REV. A *TANK CARS ARE LOADED TO FULL SHELL GALLONAGE CAPACITY

NAME OF CARRIER Horizon Traveling

CARRIER'S NO. _____

RECEIVED, subject to the clearances and tariffs in effect on the date of the date of the Bill of Lading

<p>NOTE - Where the rate is dependent on value shippers are required to state specifically in writing the agreed or declared value of the property The agreed or declared value of the property is hereby specifically stated by the shipper to be exceeding</p>		<p>Subject to Section 7 of conditions of applicable bill of lading, if this shipment is to be delivered to the consignee without recourse on the consignor, the consignor shall sign the following statement. The carrier shall not make delivery of this shipment without payment of freight and all other lawful charges.</p>		<p>If charges are to be prepaid, write or stamp here, "To be Prepaid." PREPAID</p>	
<p>The property described below, in apparent good order except as noted hereon and condition of contents of packages (where marked, damaged and described as indicated below which and where (the word carrier being understood throughout this document) is necessary to ensure any person or corporation in possession of the property under the contract) agree to carry to its usual place of delivery or final destination, if on its route otherwise to deliver to another carrier on the route to and destination. It is mutually agreed as to each carrier of all or any of said property over all or any portion of said route to destination and as to each party of any time interested in all or any of said property that every service to be performed hereunder shall be subject to all the terms and conditions of the Uniform Domestic Storage Bill of Lading set forth (1) in Official Tariff, Section and (2) in the applicable motor carrier classification or tariff if this is a motor carrier shipment. Shipper hereby certifies that he is familiar with all the terms and conditions of the said bill of lading, including those on the back thereof set forth in the classification or tariff which govern the transportation of this shipment, and the said terms and conditions are hereby agreed to by the shipper and accepted for himself and his agents.</p>		<p>Per _____ (Signature of consignor)</p>		<p>Rec'd \$ _____ to apply in prepayment of the charges on the property described hereon.</p>	
<p>CONSIGNEE TO (Mail or street address of consignee - For purposes of notification only.) GILSCOT GUIDROZ C/O P&O C/O UP RAILROAD MARION, AR</p>		<p>FROM: RICECO 5100 POPLAR AVENUE SUITE 2428 MEMPHIS, TN 38137</p>		<p>Agent or Cashier, Per _____ (The signature here acknowledges only the amount prepaid.)</p>	
<p>*DELV. ADDRESS _____ COUNTY _____</p>				<p>Charges advanced: \$ _____</p>	
<p>SOLD TO: aventis</p>		<p>FOR CHEMICAL EMERGENCY - SPILL, LEAK, FIRE, EXPOSURE OR ACCIDENT, CALL CHEMTREC - DAY OR NIGHT 1-800-424-9300.</p>		<p>SHIPPERS NUMBER No R - 0963</p>	

CUSTOMER ORDER NO. 22100020	RICECO ORDER NO. 3110	DATE SHIPPED 12-20-00	BOOKING# OWS1082620
CAR VEHICLE INITIALS & NUMBER KNL-429201-5	GROSS WT. 3060	TARE 44,080	NET WEIGHT POUNDS 41,800 TONS

(*To be filled in only when shipper desires and governing tariffs provide for delivery thereof.)
ROUTING

NUMBER &	TYPE OF PACKAGES	Check if hazardous material	Description of Articles, Special Marks & Exceptions	QUANTITY	BASIS	WEIGHTS
760	25 KG BAGS		CHEMICALS, N.O.I., PROPANIL TECHNICAL - FLAKED			55 LBS. NET EACH 58 LBS. GROSS EACH
SEAL#	13077		BOOKING# OWS1082620 STEAMSHIP LINE: P&O/OWL VESSEL: "OOCL CALIFORNIA V0475"			LOT# FL0002-01:68 FL09013-01:127 FL09027-02:154 FL09022-02:384 FL0903-01:27

*This is to certify that the above named articles are properly classified, described, packaged, marked and labeled and are in proper condition for transportation according to the applicable regulations of the Department of Transportation.

RICECO
Per Brian Lopez Shipper _____ Agent _____
Per _____

The description and weight indicated on this bill of lading are correct, subject to verification by the Weighing and Inspection Bureau having jurisdiction, according to agreement.

RICECO
PER Brian Lopez Shipper: _____

*Shipper's Imprint in lieu of stamp: not a part of bill of lading approved by the Interstate Commerce Commission.

INITIAL NO. _____ +CAR SEAL Joe Wilson +DUNNAGE _____

ORDER BILLING DETAIL
Permanent post office address of shipper:
RICECO, 5100 POPLAR AVE., SUITE 2414, MEMPHIS, TN 38137

ORIGINAL
AB0000019446

From: Jim Krusling <krusling@cvrtmail.com>
To: lwalker@cvrtmail.com <lwalker@cvrtmail.com>
Date: Thursday, November 16, 2000 9:59 AM
Subject: Drum Liner

Bob Martin
501-945-5452
800-726-7165

Lisa,

I think this is the drum liner. Does it make any sense to you?

Jim

>From: Cedar Chemical Corporation <jmancini@cvrtmail.com>
>To: "Krusling@cvrtmail.com" <Krusling@cvrtmail.com>
>Subject: FW: supersack: replace the previous message
>Date: Thu, 16 Nov 2000 15:29:29 -0600

>
>
>

>-----Original Message-----

>From: Serge.Ravet@aventis.com [SMTP:Serge.Ravet@aventis.com]
>Sent: Thursday, November 16, 2000 2:51 PM
>To: jmancini@cvrtmail.com
>Cc: Dan.Stahl@aventis.com
>Subject: supersack: replace the previous message

>

>Joe,

>I think there are the data you were looking for, just received from
>Degussa, and so far we need to keep the same packaging:
>As already mentioned, CS-DCA is in accordance to Dangerous Goods
>Regulation for shipments (ADR) with trucks. To meet the ADR for
>shipments, it is sufficient to fill CS - DCA e.g. in PE-drums with
>UN-classification.
>To get higher security for handling, shipments and storing we fill
>Cyclanilide in two PE-bags (one into another) with 50 kgs/net. These bags
>will be put into the PE-drum.
> From our department, which is responsible for purchasing of these bags, I

> received following specification:

>Dimension: 510mm x 510 mm x1400 mm x 0,1 mm
>Material: PE-bag, welded
>Volume: 100 L
>Colour: transparent

>

>

>best regards
>serge ravet

~~39.37067874 mil~~
millimeter = 39.37067874 mil 20 x 20 x 55
1 mil thick

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Note: This page will perform a maximum of 65 measurement conversions, whereas your current input would require 121 conversions. Try either increasing the "Increment number by" or decreasing the "End with number".

Conversion Table	
millimeter	mil
0.1	3.93700787401575
1.1	43.3070866141732
2.1	82.6771653543307
3.1	122.047244094488
4.1	161.417322834646
5.1	200.787401574803
6.1	240.157480314961
7.1	279.527559055118
8.1	318.897637795276
9.1	358.267716535433
10.1	397.637795275591
11.1	437.007874015748
12.1	476.377952755905
13.1	515.748031496063
14.1	555.11811023622
15.1	594.488188976378
16.1	633.858267716536
17.1	673.228346456693
18.1	712.59842519685
19.1	751.968503937008
20.1	791.338582677166
21.1	830.708661417323
22.1	870.07874015748
23.1	909.448818897638
24.1	948.818897637795
25.1	988.188976377953
26.1	1027.55905511811
27.1	1066.92913385827
28.1	1106.29921259843
29.1	1145.66929133858
30.1	1185.03937007874
31.1	1224.4094488189
32.1	1263.77952755906
33.1	1303.14960629921
34.1	1342.51968503937
35.1	1381.88976377953
36.1	1421.25984251968
37.1	1460.62992125984
38.1	1500
39.1	1539.37007874016
40.1	1578.74015748032
41.1	1618.11023622047
42.1	1657.48031496063
43.1	1696.85039370079
44.1	1736.22047244094
45.1	1775.5905511811
46.1	1814.96062992126
47.1	1854.33070866142
48.1	1893.70078740157
49.1	1933.07086614173
50.1	1972.44094488189
51.1	2011.81102362205
52.1	2051.1811023622

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[Conv. & Calc. Home](#) --> [Measurement Conversion](#)

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Conversion Table

mm	in
0	0.000
1	0.039
2	0.079
3	0.118
4	0.157
5	0.197
6	0.236
7	0.276
8	0.315
9	0.354
10	0.394
11	0.433
12	0.472
13	0.512
14	0.551
15	0.591
16	0.630
17	0.669
18	0.709
19	0.748
20	0.787
21	0.827
22	0.866
23	0.906
24	0.945
25	0.984
26	1.024

Legend:

mm = millimeter

in = inch

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Send comments to Info@ConvertIt.com

53.1	2090.55118110236
54.1	2129.92125984252
55.1	2169.29133858268
56.1	2208.66141732284
57.1	2248.03149606299
58.1	2287.40157480315
59.1	2326.77165354331
60.1	2366.14173228346
61.1	2405.51181102362
62.1	2444.88188976378
63.1	2484.25196850394
64.1	2523.62204724409

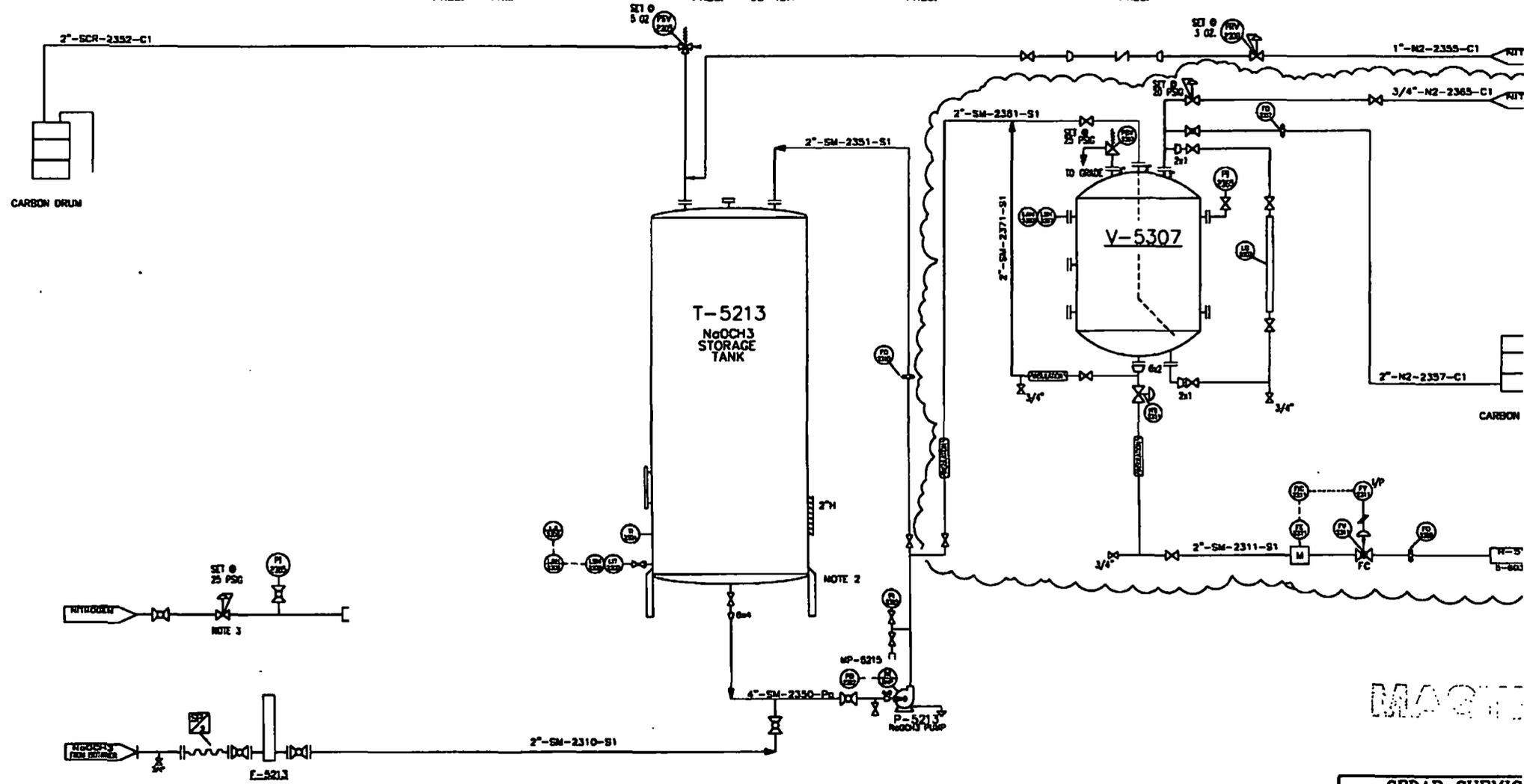
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Send comments to Info@Convertit.com

EQ. NO. T-5213
 TYPE TANK
 NAME NaOCH3 STORAGE TANK
 VENDOR ◊
 MATL 316SS
 SIZE -
 HP N/A
 RPM N/A
 CAPACITY 10,000 GAL
 TEMP 10 C
 PRES. ATM

EQ. NO. P-5213
 TYPE PUMP
 NAME NaOCH3 PUMP
 VENDOR DURCO
 MATL 316 SS
 SIZE 2 x 2R-10/80
 HP 10
 RPM 1750
 CAPACITY 60 GPM
 TEMP 10 C
 PRES. 68" TDH

EQ. NO. F-5213
 TYPE FILTER
 NAME CARTRIDGE FILTER
 VENDOR ◊
 MATL 316SS
 SIZE 2"x2"
 HP N/A
 RPM N/A
 CAPACITY 5 MICRON FILTERS
 TEMP
 PRES.

EQ. NO. V-5307
 TYPE VESSEL
 NAME ◊
 VENDOR ◊
 MATL 304SS
 SIZE 3'0"x3'4" H
 HP N/A
 RPM N/A
 CAPACITY 200 GAL
 TEMP
 PRES.



- NOTES:
1. SS BRND TPE 1/2"10' LONG
 2. STEAM TRACING TO VESSEL & LINES TO BE DISCONNECTED, DRAINED, AND FLANGED.
 3. N2 STATION @ ISOLATION UNLOADING SPOT.

NO	REVISIONS	DATE	BY	CHKD	APPR	DESC
1	ADDITION OF V-5307 (REVISED)	10/08/03	ALM	SM	DM	
2	ADDITION OF V-5307	10/08/03	ALM	SM	DM	
3	AS BUILT	11/28/03	ALM	SMF		
4	GENERAL REVISIONS	10/18/03	ALM	SMF		
5	GENERAL REVISIONS	8/8/03	TCC			
6	FOR OPERATIONS	4/16/03	TCC	SMF	SMF	

CEDAR CHEMIC CORPORATION
 WEST HELONA, ARIZONA

UNIT FIVE

AVENTIS CYCLAMILIDE PIPING & INSTRUMENTATION 0 SODIUM METHOXIDE STORAGE

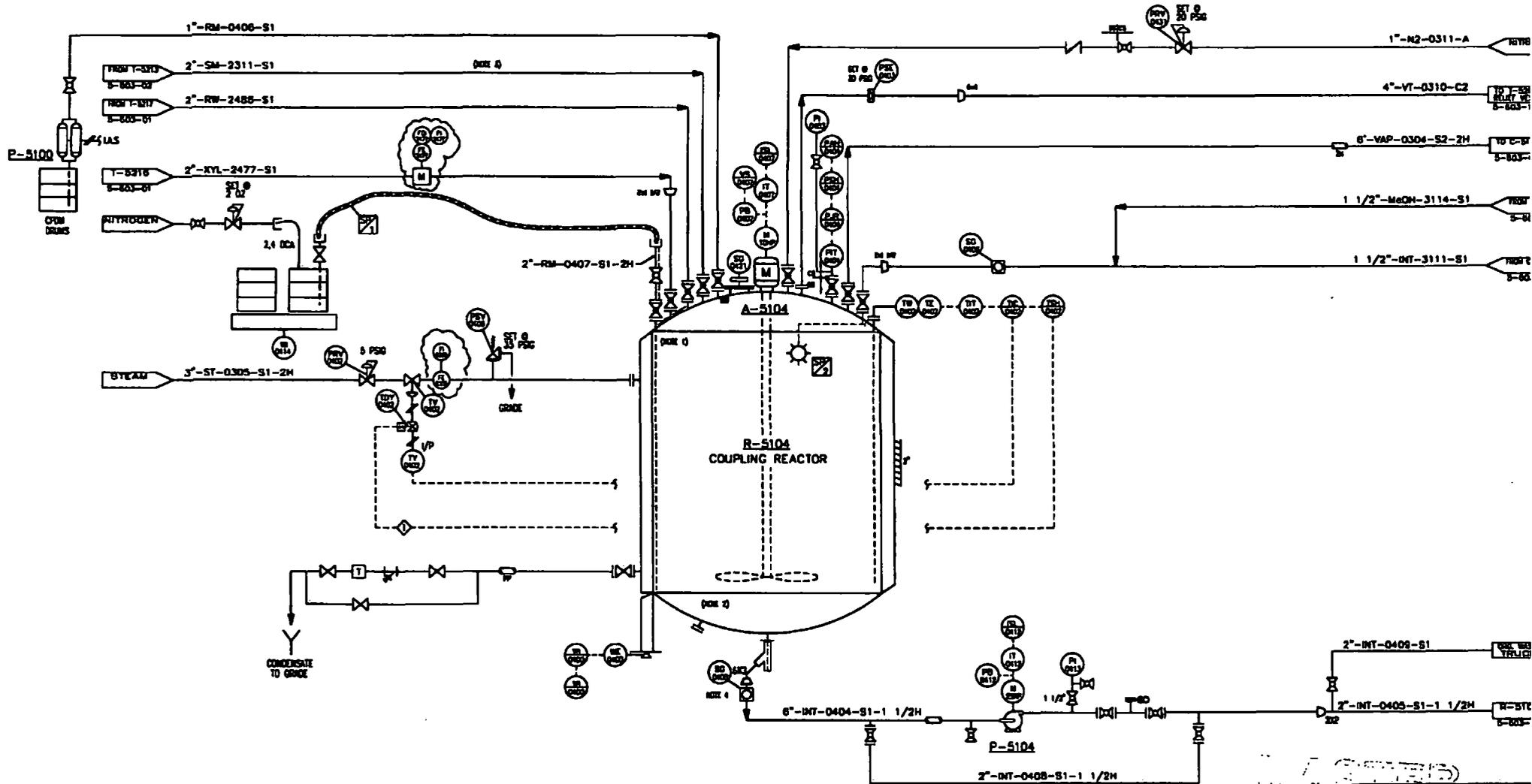
SCALE: NONE
 SHEET: 5-803-02

EQ. NO. P-5100
 TYPE CPDM PUMP
 NAME DIAPHRAGM
 VENDOR O
 MATL 316
 SIZE 2
 HP O
 RPM O
 CAPACITY O
 TEMP O
 PRES. O

EQ. NO. R-5104
 TYPE REACTOR
 NAME VERTICAL
 VENDOR MITTBERGHT BOILER WORKS
 MATL 316
 SIZE 15" OAL x 78" OD
 HP O
 RPM O
 CAPACITY 2,670 GAL
 TEMP 300F DESIGN
 PRES. 30 PSIG INTL/75 PSIG EXTL.

EQ. NO. P-5104
 TYPE REACTOR PUMP
 NAME CENTRIFUGAL
 VENDOR CURCO MARK 8-SERIAL #347825
 MATL 316 SS
 SIZE 6X4
 HP 25
 RPM 1,800
 CAPACITY 300 GPM
 TEMP O
 PRES. 100 TDH

EQ. NO. A-5104
 TYPE GESTER RACTOR AGITATOR
 NAME O
 VENDOR O
 MATL 316 SS
 SIZE O
 HP O
 RPM O
 CAPACITY O
 TEMP O
 PRES. O



NOTES:

1. TOP PIPE/ SPARGER 1/2" 1/4" ANTISTOP HOLE AND 1/4" WEEP HOLE
2. ALL BOTTOM NOZZLES EXCEPT DISCHARGE NOZZLE SEALD FLUSH MARKER WALL
3. NORMALLY OFF
4. INSTALL IN VERTICAL-BALLBEYE TYPE

INTERLOCK LOGIC:

1. FV-0402 CLOSES ON HIGH TEMP (400F)
- SP-5 2" STEAM JACKET HOSE
- SP-6 SPRTY NOZZLES

NO	REVISIONS	DATE	BY	CHKD	APPRD	DESC
1	AS PER I	11/05/00	ALM	BEF		
2	GENERAL REVISIONS	10/04/00	ALM	BEF		
3	GENERAL REVISIONS	04/05/00	ALM	BEF		
4	FOR ENGINEERING	04/05/00	ALM	BEF		

NO	DATE	BY	CHKD	APPRD	DESC
1	11/05/00	ALM	BEF		
2	10/04/00	ALM	BEF		
3	04/05/00	ALM	BEF		
4	04/05/00	ALM	BEF		

CEDAR CHEMIC CORPORATION
 WEST HELONA, ARIZONA

UNIT 5

AVENTIS CYCLANILIDE
 PIPING & INSTRUMENTATION OF
 COUPLING REACTOR

SCALE: NONE

9-803-03

EQ. NO. C-5104
 TYPE VERTICAL
 NAME COUPLING COLUMN
 VENDOR
 MATL
 SIZE 23.5" Dia x 47'-3 1/2"
 HP
 RPM
 CAPACITY
 TEMP
 PRES.

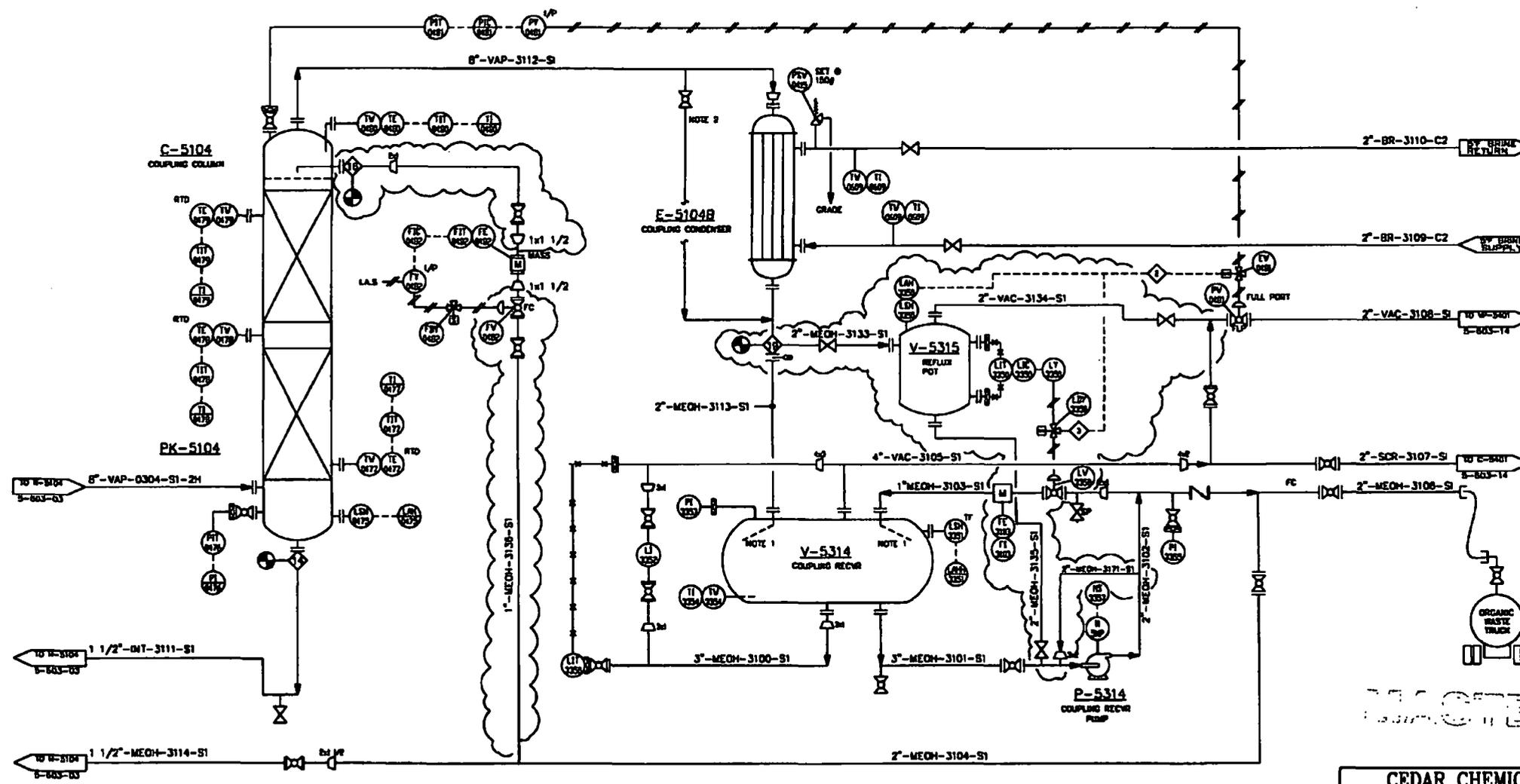
EQ. NO. PK-5104
 TYPE 1T STRUCTURED
 NAME COUPLING COLUMN PACKING
 VENDOR MORTON
 MATERIAL 304L SS
 SIZE
 HP
 RPM
 MM BTUH
 TEMP
 PRES.

EQ. NO. E-5104B
 TYPE SHELL/TUBE
 NAME COUPLING CONDENSER
 VENDOR
 MATL SS/SS
 SIZE
 HP
 RPM
 CAPACITY
 TEMP
 PRES.

EQ. NO. V-5314
 TYPE VERTICAL
 NAME COUPLING RECEIVER
 VENDOR
 MATL 316 SS
 SIZE
 HP
 RPM 400
 CAPACITY 500 GAL
 TEMP
 PRES. 30 PSIG/TV

EQ. NO. P-5314
 TYPE CENTRIFUGAL
 NAME COUPLING RECVR PUMP
 VENDOR
 MATL 316 SS
 SIZE 24x10A
 HP 1750
 RPM
 CAPACITY 40 GPM
 TEMP
 PRES. 80 FT

EQ. NO. V-5315
 TYPE CATCH TANK
 NAME REFLUX POT
 VENDOR
 MATL CS
 SIZE 1'-8" x 2'
 HP
 RPM
 CAPACITY 70 GAL
 TEMP
 PRES.



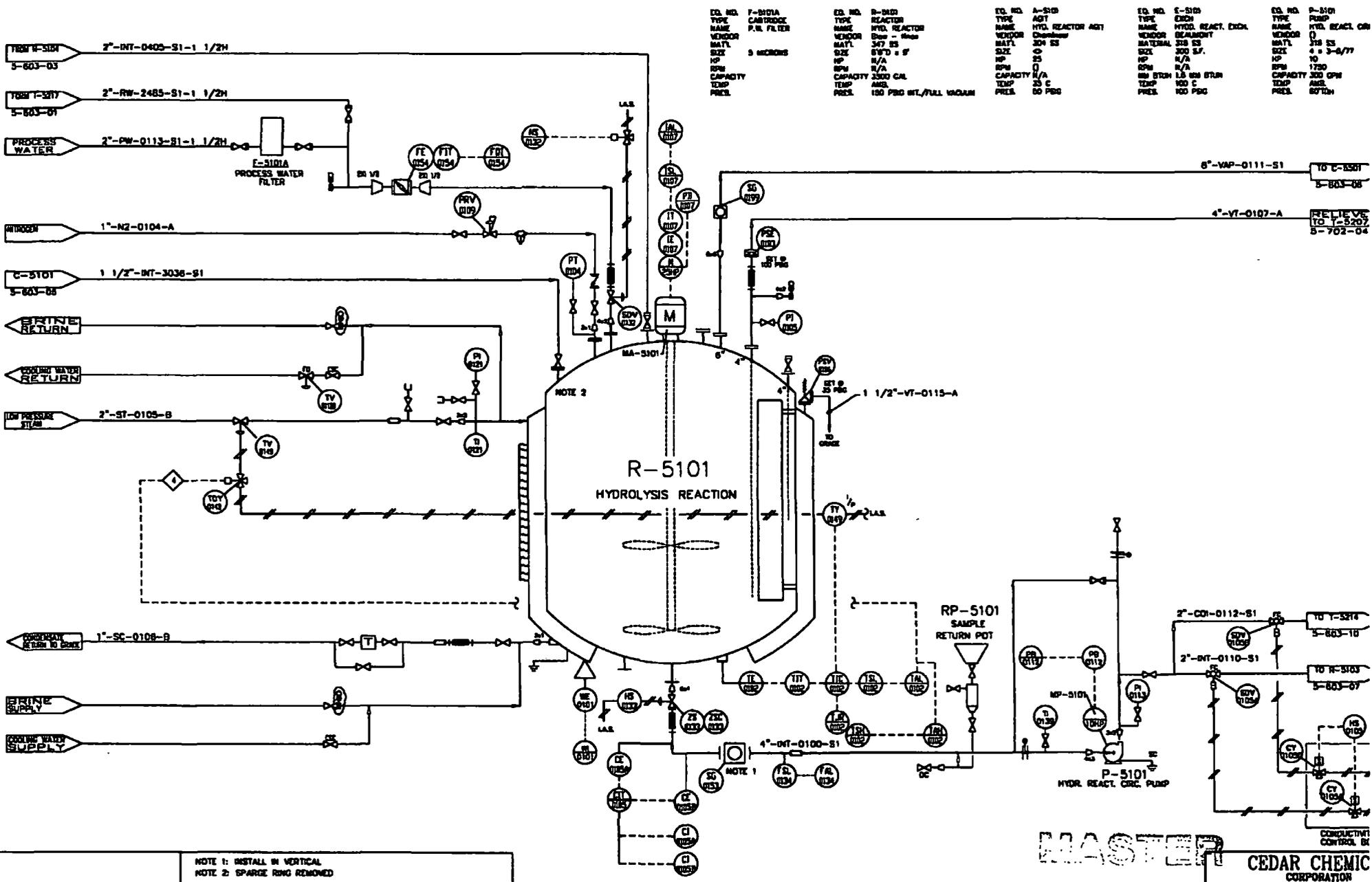
- NOTES:
 1. INSTALL 45° SPLASH LEG DIRECTING FLOW AGAINST VESSEL WALL
 2. LOW POINT DRAIN

- INTERLOCK LOGIC:
 2. PV-0481 CLOSURES ON HIGH LEVEL
 3. FV-3350 OPENS ON HIGH LEVEL

NO	REVISIONS	DATE	BY	CHKD	APPRD
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CEDAR CHEMICAL CORPORATION
 WEST MELBOURNE, ARKANSAS
 UNIT FIVE
 AVENTIS CYCLANILIDE
 PIPING & INSTRUMENTATION I
 COUPLING DISTILLATION
 TAG NONE
 IMA 5-603-04



EQ. NO.	F-5101A	EQ. NO.	B-5101	EQ. NO.	A-5101	EQ. NO.	C-5101	EQ. NO.	P-5101
TYPE	CARBTRIDGE	TYPE	HYD. REACTOR	TYPE	HYD. REACTOR AGT	TYPE	EXCH.	TYPE	HYD. REACT. COOL.
NAME	P.W. FILTER	NAME	HYD. REACTOR	NAME	Chamber	NAME	HYD. REACT. EXCH.	NAME	HYD. REACT. COOL.
VENDOR		VENDOR	Dow - Howe	VENDOR		VENDOR	315 ES	VENDOR	315 ES
MAT'L		MAT'L	317 ES	MAT'L	317 ES	MAT'L	315 ES	MAT'L	315 ES
SIZE	5 MICRONS	SIZE	8'10" x 6'	SIZE	Ø	SIZE	315 SF.	SIZE	4 x 3-6/77
HP		HP	N/A	HP	25	HP	N/A	HP	10
RPM		RPM	N/A	RPM	Ø	RPM	N/A	RPM	1750
CAPACITY		CAPACITY	3500 GAL	CAPACITY	N/A	WGT. STKN	1.5 WGT. STKN	CAPACITY	300 GPM
TEMP		TEMP		TEMP	25 C	TEMP	100 C	TEMP	ANSI
PRES.		PRES.	150 PSIG WT./FULL VACUUM	PRES.	85 PSIG	PRES.	100 PSIG	PRES.	BOTTOM

NOTE 1: INSTALL IN VERTICAL
 NOTE 2: SPARGE RING REMOVED

INTERLOCK LOGIC:
 4. TV-0149 SHUTS ON HIGH TEMP

NO.	REVISIONS	DATE	BY	CHKD	APPROV.	DESCRIPTION
1	AS PER 1	11/2/80	ALB	MSF		ISSUED FOR CONSTRUCTION
2	GENERAL REVISIONS	11/2/80	ALB	MSF		ISSUED FOR CONSTRUCTION
3	GENERAL REVISIONS	11/2/80	TDG	APPE		ISSUED FOR CONSTRUCTION
4	FOR ENGINEERING	6/18/80	TCCG	MSF	APPE	ISSUED FOR CONSTRUCTION

MASTER

CEDAR CHEMICAL CORPORATION
 WEST MOLENA, ARIZONA

UNIT FIVE

**AVENTIS CYCLANILIDI
 PIPING & INSTRUMENTATION C
 HYDROLYSIS REACTOR**

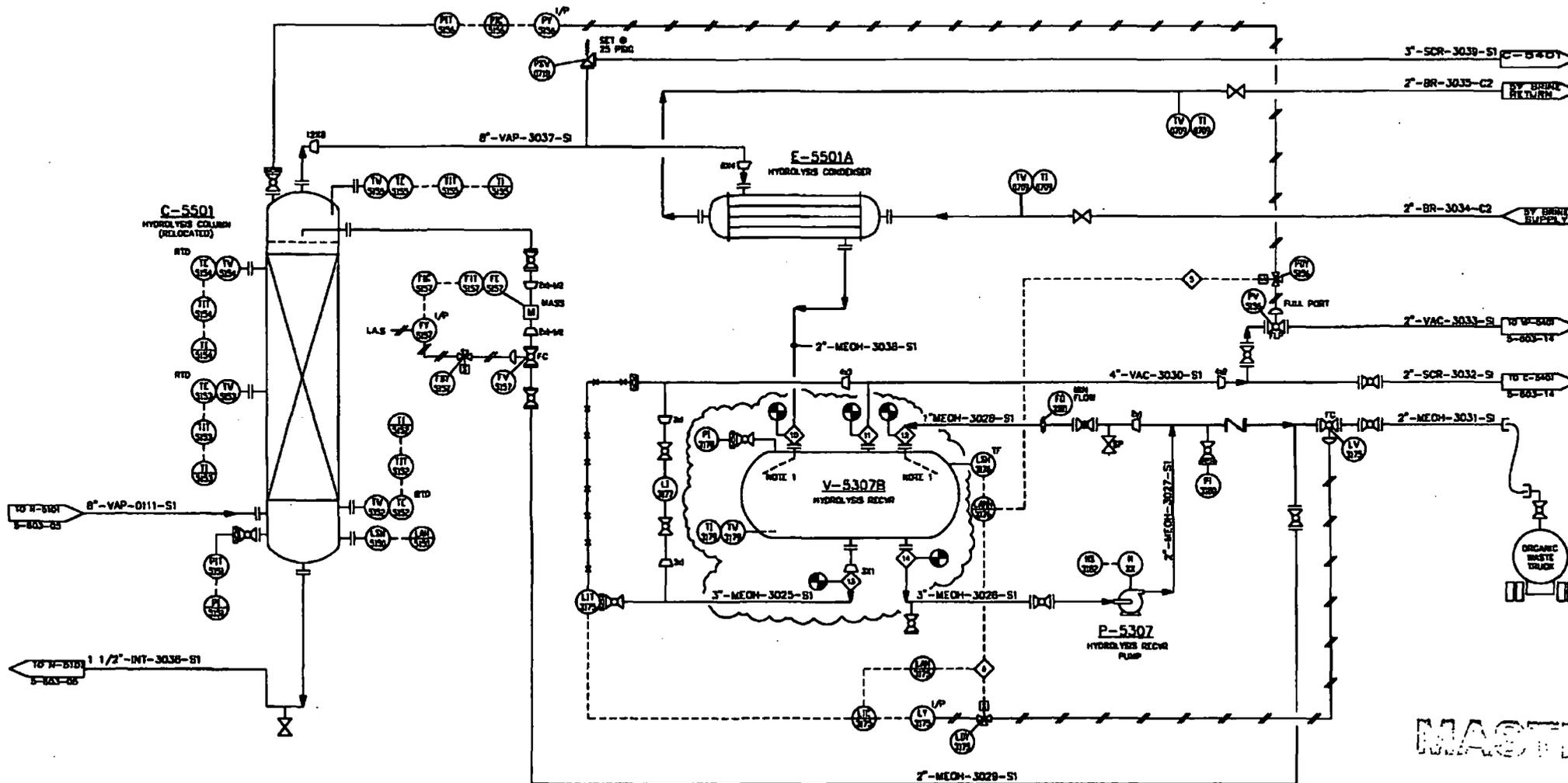
SCALE: NONE
 NO. 5-603-05

EQ. NO. C-5501
 TYPE VERTICAL
 NAME HYDROLYSIS COLUMN
 VENDOR
 MATL SS
 SIZE
 HP
 RPM
 CAPACITY
 TEMP
 PRES.

EQ. NO. E-5501A
 TYPE SHELL/TUBE
 NAME HYDROLYSIS CONDENSER
 VENDOR
 MATL SS/SS
 SIZE 140 SQ. FT.
 HP
 RPM
 CAPACITY
 TEMP
 PRES.

EQ. NO. V-5307B
 TYPE VERTICAL
 NAME HYDROLYSIS RECVR
 VENDOR
 MATL 316L SS
 SIZE
 HP
 RPM
 CAPACITY 70 GAL
 TEMP 300°F
 PRES. 25 PSIG/TV

EQ. NO. P-5307
 TYPE CENTRIFUGAL
 NAME HYDROLYSIS RECVR PUMP
 VENDOR CHESTERTON
 MATL 316 SS
 SIZE 3x1 1/2x10
 HP 7 1/2
 RPM 1750
 CAPACITY 50 GPM
 TEMP 120°F
 PRES. 100 FT



NOTES:
 1. INSTALL 45° SPLASH LEG DIRECTING FLOW AGAINST VESSEL WALL.

INTERLOCK LOGIC:
 5. PV-5156 CLOSES ON HIGH LEVEL
 6. LV-3175 OPENS ON HIGH LEVEL

NO.	REVISIONS	DATE	BY	CHKD	APPV	DESC
1	GENERAL REVISION	10/20/01	ALM	JK		
2	AS BUILT	11/20/02	ALM	JK		
3	GENERAL REVISION	12/18/03	ALM	JK		
4	GENERAL REVISION	8/26/04	TEC			
5	FOR ENGINEERING	8/18/05	TEC	MB		

MAST

CEDAR CHEM
 CORPORATION
 WEST HAVEN, CONNECTICUT

UNIT FIVE

**AVENTIS CYCLANILIDE
 PIPING & INSTRUMENTATION
 HYDROLYSIS DISTILLATION**

SCALE: NONE
 TAG: 5-603-08

EQ. NO. P-5103B
 TYPE DIAPHRAGM PUMP
 NAME F.A. PUMP
 VENDOR WILDEN
 MATL. ○
 SIZE ○
 HP ○
 RPM ○
 CAPACITY ○
 TEMP ○
 PRES. ○

EQ. NO. R-5103
 TYPE REACTOR
 NAME PRECIPITATION
 VENDOR ○
 MATL. GLS
 SIZE 8'0" x 8'
 HP N/A
 RPM N/A
 CAPACITY 3000 GAL
 TEMP 80 C
 PRES. ATM

EQ. NO. A-5103
 TYPE AGIT
 NAME PRECIPITATION
 VENDOR ○
 MATL. 316 SS
 SIZE ○
 HP ○
 RPM ○
 CAPACITY N/A
 TEMP 60 C
 PRES. ATM

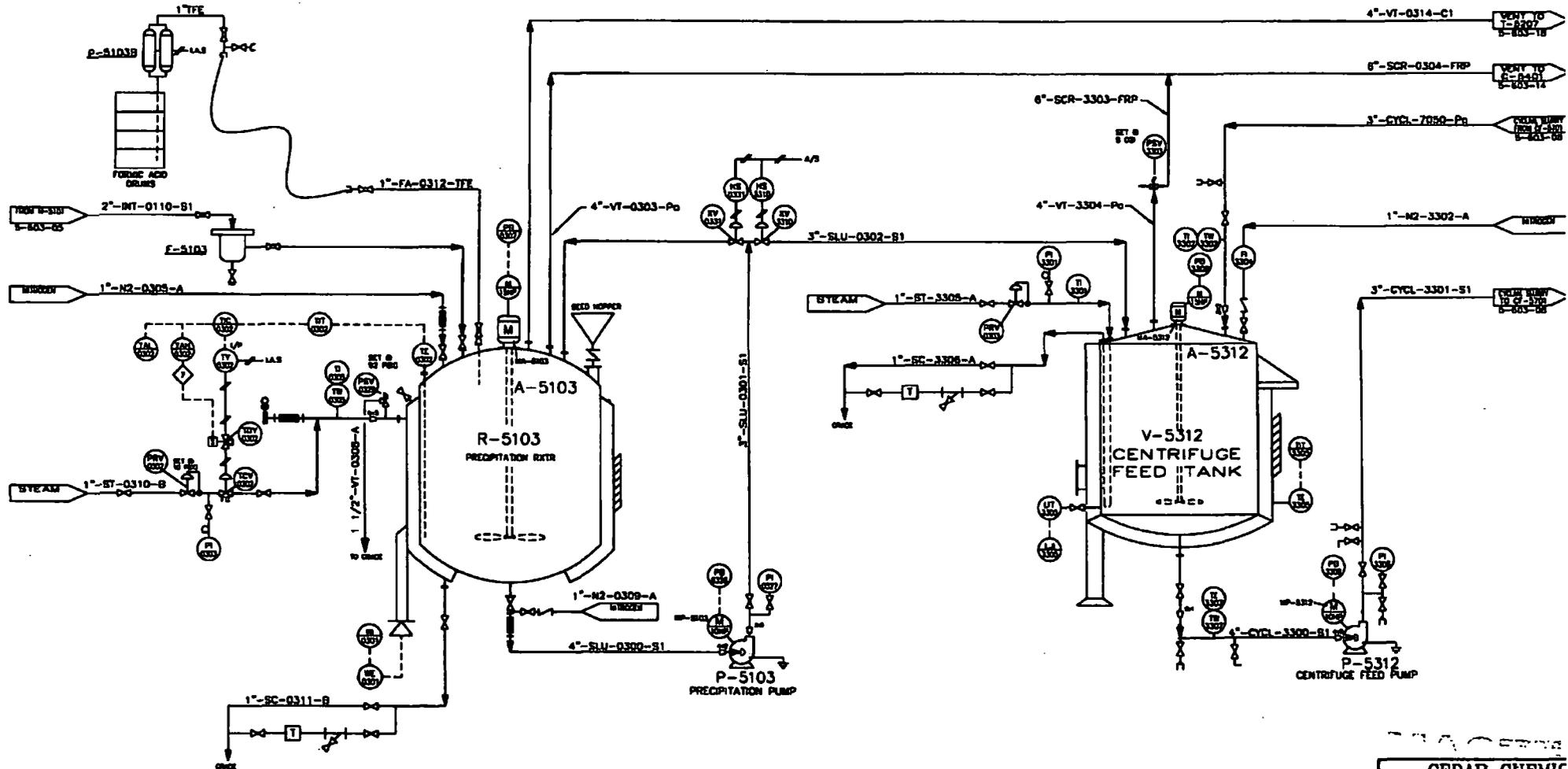
EQ. NO. P-5103
 TYPE SLURRY PUMP
 NAME PRECIPITATION PUMP
 VENDOR DURCO
 MATL. 316 SS
 SIZE 2 x 2R-10/70
 HP 10
 RPM 1750
 CAPACITY 200 GPM
 TEMP 10 C
 PRES. 65' TDH

EQ. NO. F-5103
 TYPE BAG FILTER
 NAME FILTER
 VENDOR ○
 MATL. 316 SS
 SIZE 200 MICRON
 HP N/A
 RPM N/A
 CAPACITY ○
 TEMP ○
 PRES. ○

EQ. NO. V-5312
 TYPE TANK
 NAME CENTRIFUGE FEED TANK
 VENDOR ○
 MATL. SS
 SIZE 9'0" x 9'-3"
 HP N/A
 RPM N/A
 CAPACITY 5000 GAL
 TEMP 10 C
 PRES. ATM

EQ. NO. P-5312
 TYPE PUMP
 NAME CENTRIFUGE FEED PUMP
 VENDOR DURCO
 MATL. 316 SS
 SIZE 2 x 2R-10/80
 HP 10
 RPM 1750
 CAPACITY 200 GPM
 TEMP 10 C
 PRES. 50' TDH

EQ. NO. A-5312
 TYPE AGIT
 NAME CENTR. 7.
 VENDOR ○
 MATL. 316 SS
 SIZE ○
 HP ○
 RPM ○
 CAPACITY N/A
 TEMP 10 C
 PRES. ATM



INTERLOCK LOGIC
 7. TCV-0302 CLOSURES ON HIGH TEMP

NO.	REVISION	DATE	BY	CHKD	APP'D
AS BUILT		11/20/00	ALM	MSF	
GENERAL REVISIONS		10/18/00	ALM	MSF	
GENERAL REVISIONS		5/5/00	TCC	MSF	
FOR ENGINEERING		8/8/00	TCC	MSF	

NO.	REVISION	DATE	BY	CHKD	APP'D
AS BUILT		11/20/00	ALM	MSF	
GENERAL REVISIONS		10/18/00	ALM	MSF	
GENERAL REVISIONS		5/5/00	TCC	MSF	
FOR ENGINEERING		8/8/00	TCC	MSF	

CEDAR CHEMIC CORPORATION
 WEST HELDON, MISSOURI

UNIT FIVE

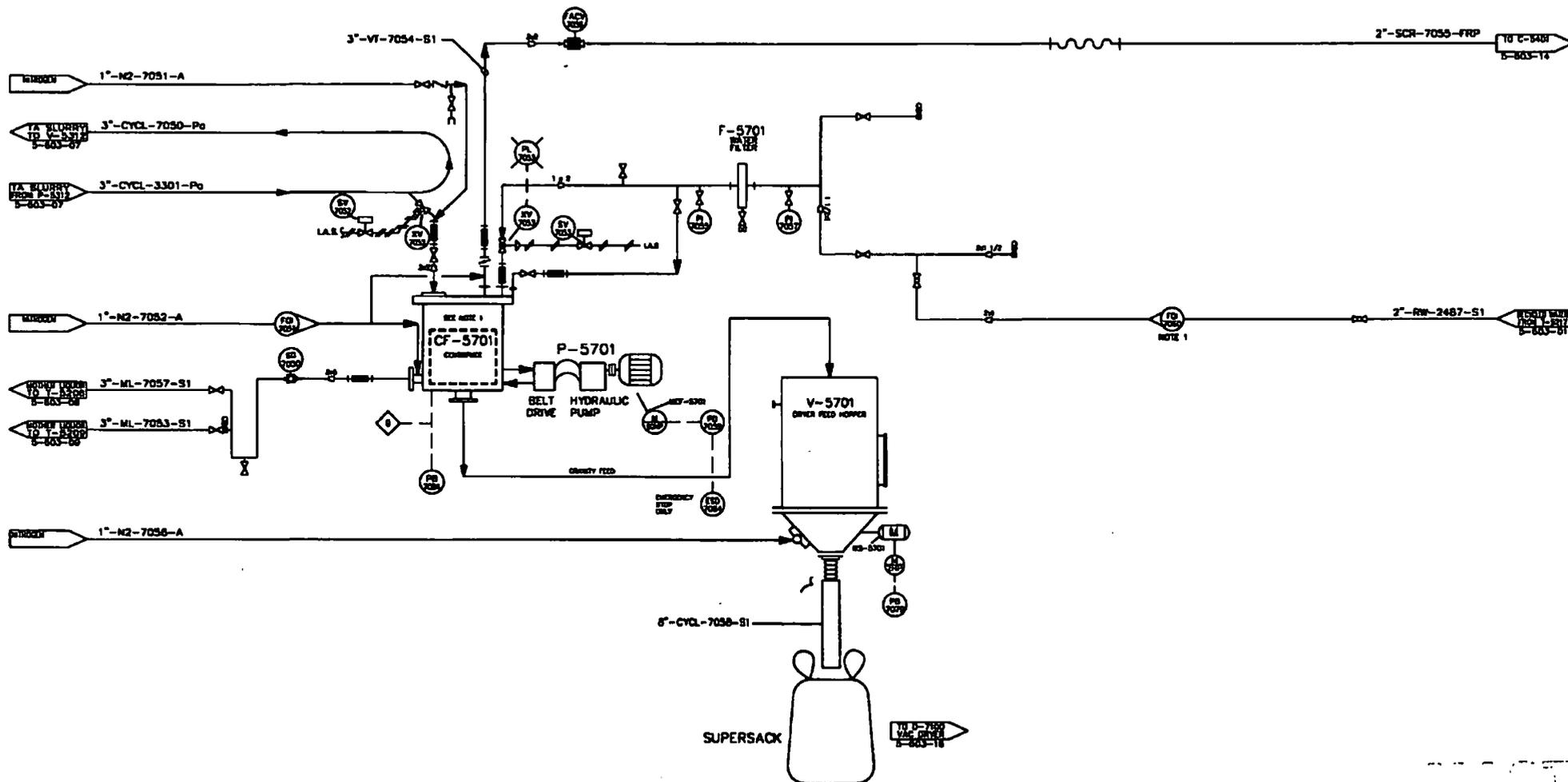
**AVENTIS CYCLANILIDE
 PIPING & INSTRUMENTATION I
 PRECIPITATION & CF FEED**

SCALE: NONE SHEET: 5-603-07

EQ. NO. CF-5701
 TYPE CENTRIFUGE
 NAME SHARPLES
 VENDOR SHARPLES
 MATL 304 SS
 SIZE 48" x 30"
 HP 80
 RPM 800
 CAPACITY 16 CU. FT.
 TEMP 10 C
 PRES. ATM

EQ. NO. F-5701
 TYPE CARTRIDGE
 NAME WATER FILTER
 VENDOR COMMERCIAL FILTERS
 MATL FULFLO MODEL 655820-3/4SD
 SIZE 3" DIA x 23"
 HP N/A
 RPM N/A
 CAPACITY <
 TEMP 175 PSI @ 200 F
 PRES. 180 PSI @ 250 F

EQ. NO. V-5701
 TYPE HOPPER
 NAME DRYER FEED HOPPER
 VENDOR <
 MATL 304 SS
 SIZE 3'0" x 4'
 HP 2
 RPM N/A
 CAPACITY 25 CU. FT.
 TEMP AMB.
 PRES. ATM



INTERLOCK LOGIC

EQ CF-5701 WILL SHUT DOWN WHEN OUT OF BALANCE.

NOTE:

1. ACCESSIBLE FROM CENTRIFUGE

NO	REVISIONS	DATE	BY	CHKD	APPROV
1	AS BUILT	11/20/80	JLM	BRF	
2	GENERAL REVISIONS	10/18/80	ALM	BRF	
3	GENERAL REVISIONS	8/19/80	JTC		
4	FOR ENGINEERING	6/4/80	TDC	BRF	MRP

DATE	BY	CHKD
11/20/80	JLM	BRF
10/18/80	ALM	BRF
8/19/80	JTC	
6/4/80	TDC	BRF

CEDAR CHEMIC CORPORATION
 WEST HELIX, ARIZONA

UNIT FIVE

AVENTIS CYCLANILIDE
 PIPING & INSTRUMENTATION D
 CENTRIFUGATION, DRYING, AND

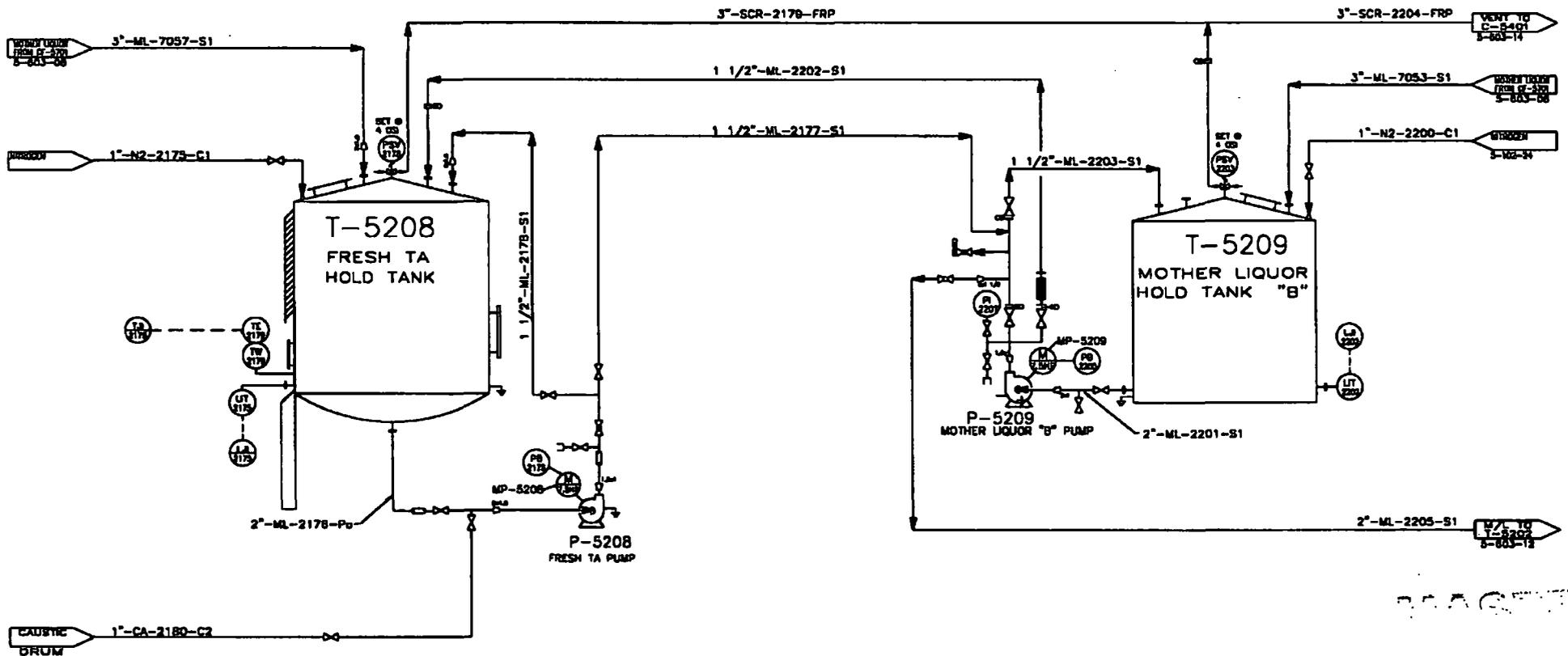
SCALE NONE
 5-803-08

EQ. NO. T-5208
 TYPE TANK
 NAME FRESH TA HOLD
 VENDOR C
 MATL 316 SS
 SIZE 8'0" x 9'
 HP N/A
 RPM N/A
 CAPACITY 4000 GAL
 TEMP 60 C
 PRES. ATM

EQ. NO. P-5208
 TYPE PUMP
 NAME FRESH TA
 VENDOR DURCO
 MATL 316 SS
 SIZE 1.5 x 1-8/70
 HP 7.5
 RPM 3600
 CAPACITY 10 GPM
 TEMP 60 C
 PRES. 200 TDH

EQ. NO. T-5209
 TYPE TANK
 NAME MOTHER LIQUOR HOLD
 VENDOR C
 MATL 304 SS
 SIZE 7'-0" x 14'-0"
 HP N/A
 RPM N/A
 CAPACITY 4000 GAL
 TEMP AMB.
 PRES. ATM

EQ. NO. P-5209
 TYPE PUMP
 NAME MOTHER LIQUOR
 VENDOR DURCO
 MATL 316 SS
 SIZE 1.5 x 1-8/74
 HP 7.5
 RPM 1750
 CAPACITY 10 GPM
 TEMP AMB.
 PRES. 60" TDH



NO.	REVISIONS	DATE	BY	CHKD	APPD
1					
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10	GENERAL REVISION	10/29/20	ALM	JK	
11	ASB BUILY	11/20/20	ALM	WST	
12	GENERAL REVISION	10/18/22	ALM	WST	
13	GENERAL REVISION	8/10/20	TDC	WST	
14	FOR ENGINEERING	6/6/20	TOO	WST	WST

CEDAR CHEMICAL CORPORATION
 WICKT HOLLOW, ARKANSAS

UNIT FIVE

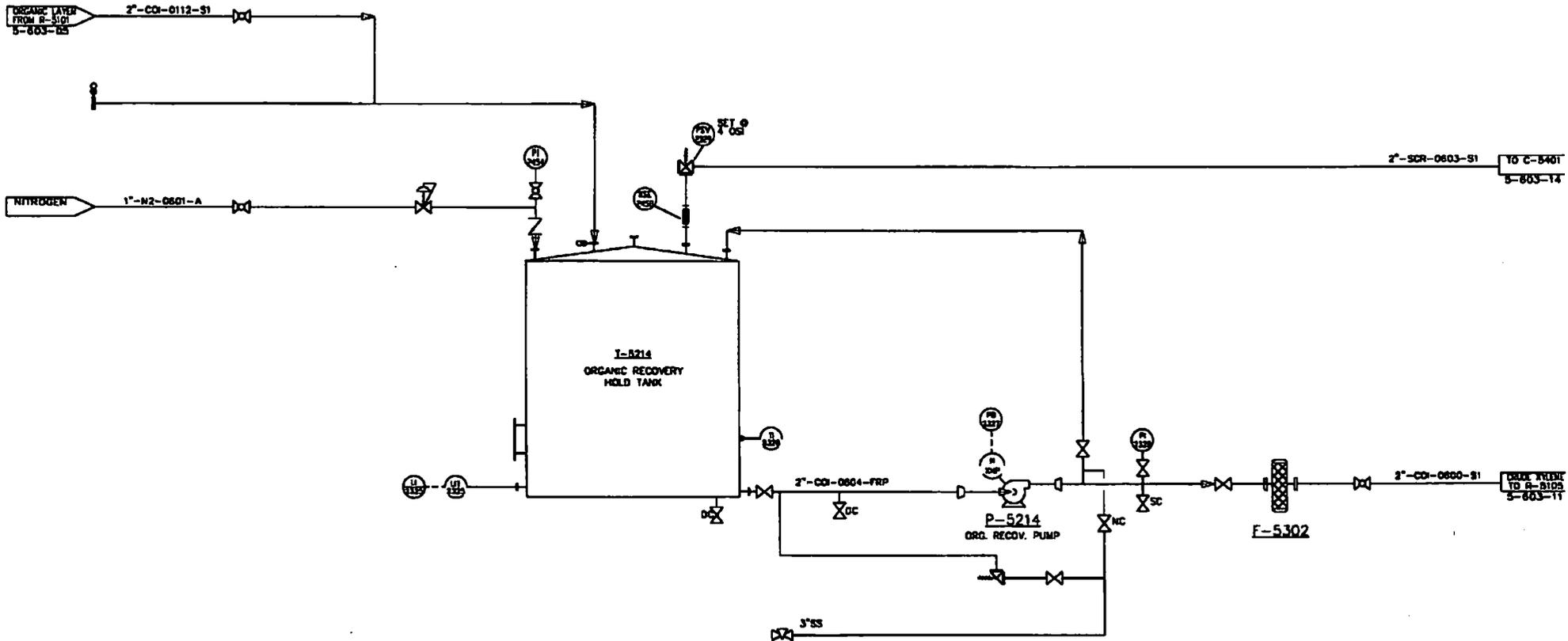
AVENTIS CYCLANLIDE PIPING & INSTRUMENTATION OF FRESH TA & MOTHER LIQUOR

SCALE: NONE
 TAG: S-603-09

EQ. NO. T-5214
 TITLE ORG. RECOV. HOLD TANK
 TYPE VERTICAL
 VENDOR
 MATL CS LINED
 SIZE 60
 HP 0
 RPM 0
 CAPACITY 17,000 GAL
 TEMP 0
 PRES. 0

EQ. NO. P-5214
 TITLE ORG. RECOV. PUMP
 TYPE CENTRIFUGAL
 VENDOR CURCO MARK II
 MATL 316 SS
 SIZE 3 X 1.5 - 8
 HP 0
 RPM 1,800
 CAPACITY 140 GPM
 TEMP 0
 PRES. 100 TDH

EQ. NO. F-5302
 TITLE ORG. RECOV. PUMP
 TYPE CARTRIDGE
 VENDOR BARTORUS
 MATL 316 SS
 SIZE 100 MICRON
 HP 0
 RPM 0
 CAPACITY 0
 TEMP 0
 PRES. 0



CEDAR CHEMIC CORPORATION
 WEST MELDEN, MISSOURI

UNIT 5

AVENTIS CYCLANILIDE
 PIPING & INSTRUMENTATION OF
 ORGANIC RECOVERY STORAGE

NO	REVISIONS	DATE	BY	CHKD	APPROV	THIS DRAWING AND THE INFORMATION IT CONTAINS ARE THE PROPERTY OF CEDAR CHEMIC CORPORATION
AS BUILT		11/20/03	ALM	REF		
GENERAL REVISIONS		10/19/03	ALM	REF		
GENERAL REVISIONS		9/19/03	TGJ	REF		
FOR CONSTRUCTION		6/26/03	TGJ	REF	REF	

SCALE NONE
 SHEET 5-803-10

EQ. NO. P-5105
 TYPE PUMP
 NAME SOLV. REC. WASTE PUMP
 VENDOR DURCO
 MATL 316 SS
 SIZE 3 x 1.5-8/74
 HP 3
 RPM 1750
 CAPACITY 100 GPM
 TEMP 100 C
 PRES. 50" TDH

EQ. NO. R-5105
 TYPE REACT
 NAME SOLV. REC. POT
 VENDOR O
 MATL CLS
 SIZE 9'-0" x 9'-3"
 HP N/A
 RPM N/A
 CAPACITY 4000 GAL
 TEMP 100 C
 PRES. ATM

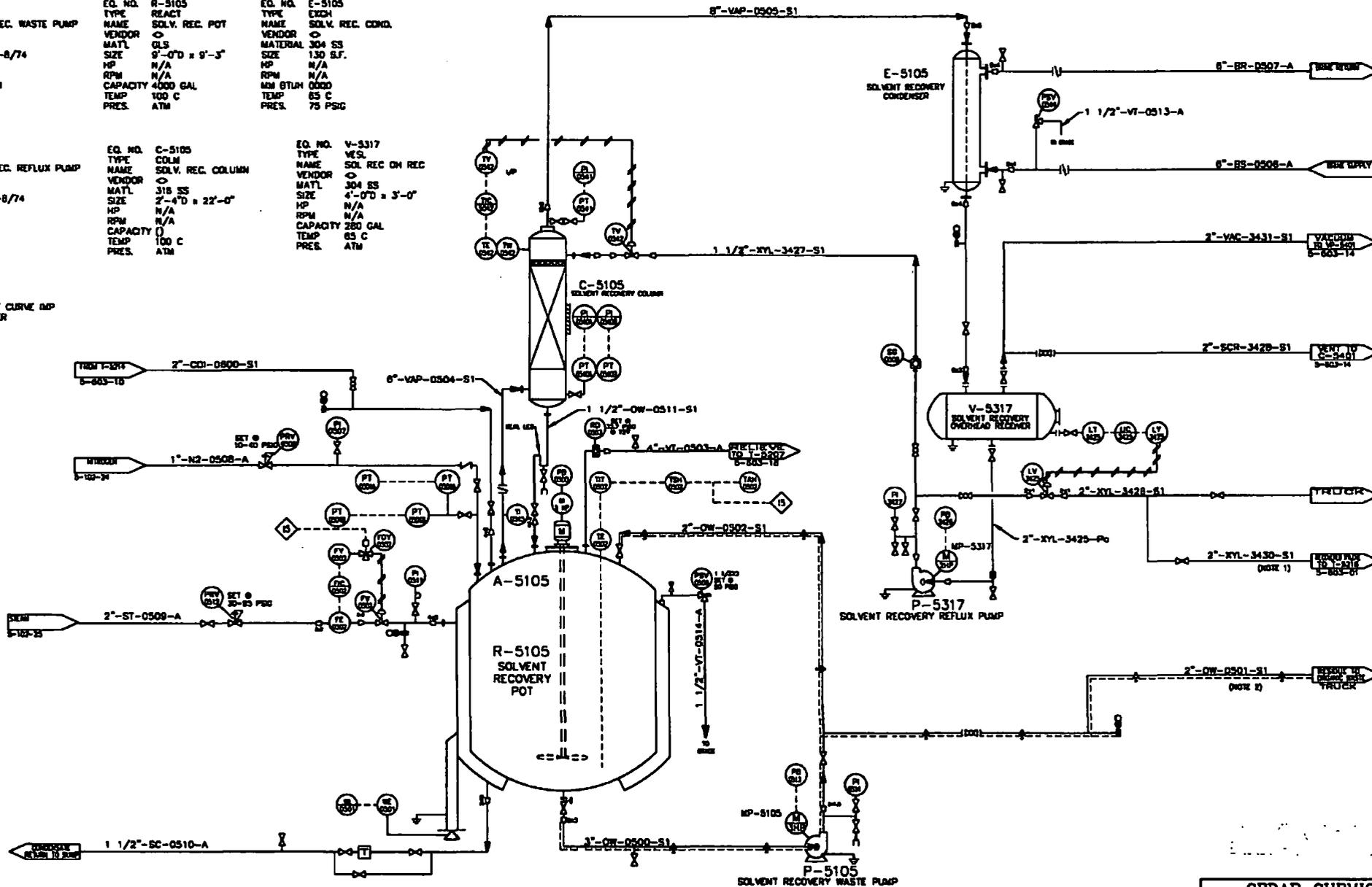
EQ. NO. E-5105
 TYPE EXCH
 NAME SOLV. REC. COND.
 VENDOR O
 MATERIAL 304 SS
 SIZE 130 SF.
 HP N/A
 RPM N/A
 MM BTUH 0000
 TEMP 65 C
 PRES. 75 PSIG

EQ. NO. P-5317
 TYPE PUMP
 NAME SOLV. REC. REFLUX PUMP
 VENDOR DURCO
 MATL 316 SS
 SIZE 1.5 x 1-8/74
 HP 2
 RPM 1750
 CAPACITY 20 GPM
 TEMP 50 C
 PRES. 50" TDH

EQ. NO. C-5105
 TYPE COLM
 NAME SOLV. REC. COLUMN
 VENDOR O
 MATL 316 SS
 SIZE 2'-4" x 22'-0"
 HP N/A
 RPM N/A
 CAPACITY 0
 TEMP 100 C
 PRES. ATM

EQ. NO. V-5317
 TYPE VESL
 NAME SOL. REC. OH REC
 VENDOR O
 MATERIAL 304 SS
 SIZE 4'-0" x 3'-0"
 HP N/A
 RPM N/A
 CAPACITY 250 GAL
 TEMP 65 C
 PRES. ATM

EQ. NO. A-5105
 TYPE GDTW
 NAME RETREAT CURVE DWP
 VENDOR PFAUDLER
 MATL GLASS
 SIZE 25
 HP
 RPM
 CAPACITY
 TEMP
 PRES.



INTERLOCK LOGIC

STRIP WASTE (75-0501) WILL SHUT OFF
 (1) 1/2" CW-0502 READER WHEN TEMP (2007)

NOTES

- EXISTING LINE
- STEAM TRACE @ INSULATE ALL ORG & DESH PIPING

NO	REVISIONS	DATE	BY	CHKD	APPV	DESC
1	GENERAL REVISION	10/04/81	ALM	JL		
2	AS BUILT	11/20/82	ALM	MSD		CHG 100 8/14/83
3	GENERAL REVISIONS	10/18/83	ALM	MSD		CHG 100
4	GENERAL REVISIONS	8/10/83	TCC	MSD		CHG 100
5	FOR ENGINEERING	6/8/80	TCC	MSD		CHG 100

CEDAR CHEMIC CORPORATION
 WEST HELDIA, ARKANSAS

UNIT FIVE

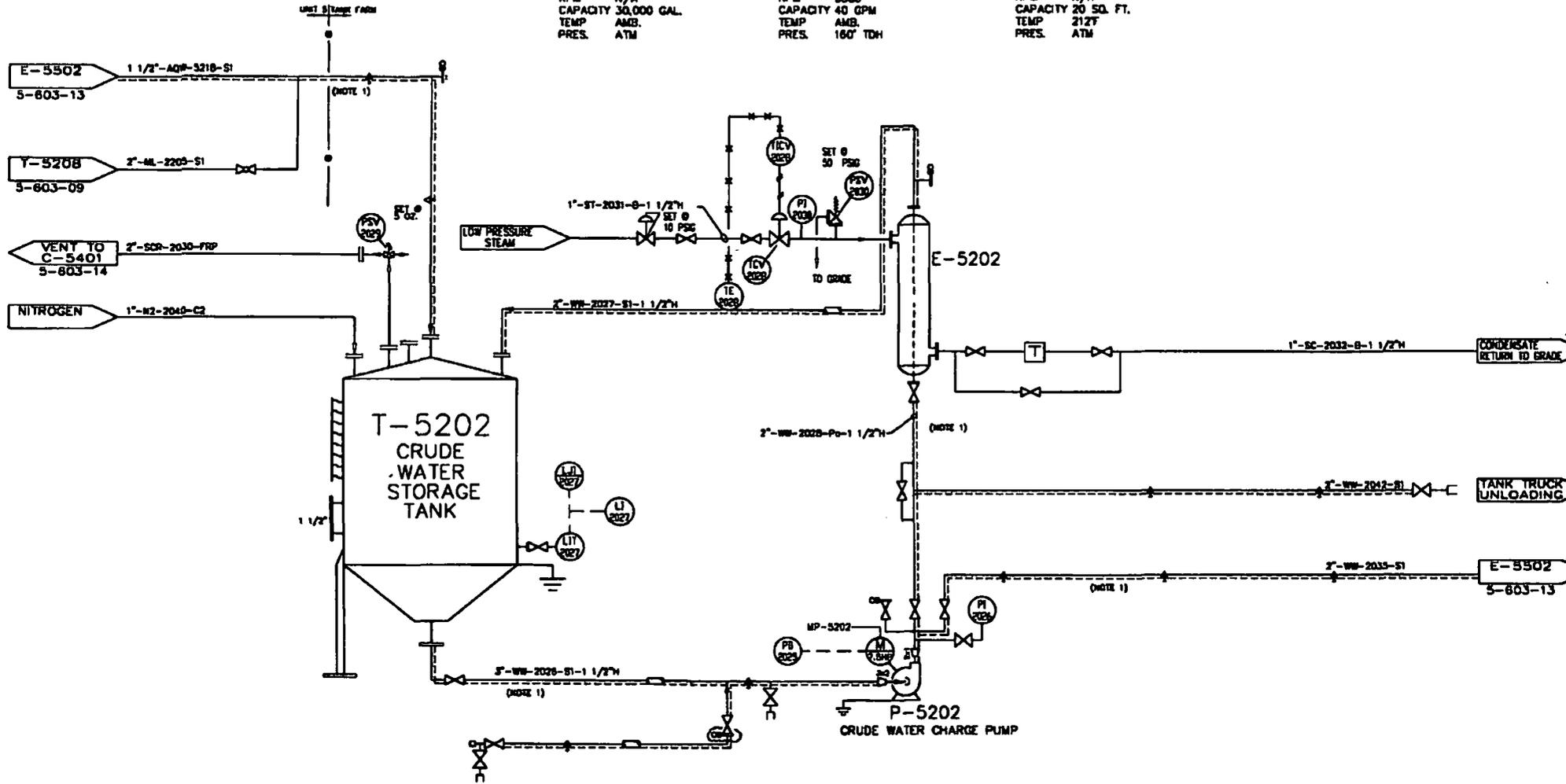
AVENTIS CYCLANILIDE
 PIPING & INSTRUMENTATION D
 STRIPPING & SOLVENT RECO

SCALE NONE
 5-803-11

EQ. NO. T-5202
 TYPE TANK
 NAME CRUDE WATER STG. TANK
 VENDOR O
 MATL 316SS
 SIZE 12' X 36'H
 HP N/A
 RPM N/A
 CAPACITY 30,000 GAL.
 TEMP AMB.
 PRES. ATM

EQ. NO. P-5202
 TYPE PUMP
 NAME CRUDE WATER CHG. PUMP
 VENDOR DURCO
 MATL 316 SS
 SIZE 1.5 X 1-8/83
 HP 7.5
 RPM 3500
 CAPACITY 40 GPM
 TEMP AMB.
 PRES. 160" TDH

EQ. NO. E-5202
 TYPE DOUBLE PIPE
 NAME CRUDE WATER STG. TANK HEATER
 VENDOR O
 MATL 316SS/C.S.
 SIZE N/A
 HP N/A
 RPM N/A
 CAPACITY 20 SQ. FT.
 TEMP 212°F
 PRES. ATM



NOTE:
 (1) STEAM TRACING USED FOR FREEZE PROTECTION ONLY

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CEDAR CHEMIC CORPORATION
 WEST MELINA, ARIZONA

UNIT FIVE

AVENTIS CYCLANILIDE
 PIPING & INSTRUMENTATION C
 RAW MATERIAL STORAGE & HV

DATE: 8/19/83
 TIME: 10:15 AM
 DRAWN: []
 CHECKED: []
 INCHES: []
 FEET: []
 SCALE: []
 NONE

5-603-12

EQ. NO. V-5401
 TYPE VESSEL
 NAME VACUUM PUMP K.O. POT
 VENDOR
 MATL SS
 SIZE N/A
 HP N/A
 RPM N/A
 CAPACITY 500 GAL
 TEMP AMB.
 PRES. FULL VACUUM

EQ. NO. V-5402
 TYPE VESSEL
 NAME VACUUM EXHAUST K.O. POT
 VENDOR
 MATL SS
 SIZE N/A
 HP N/A
 RPM N/A
 CAPACITY 300 GAL
 TEMP AMB.
 PRES. ATM

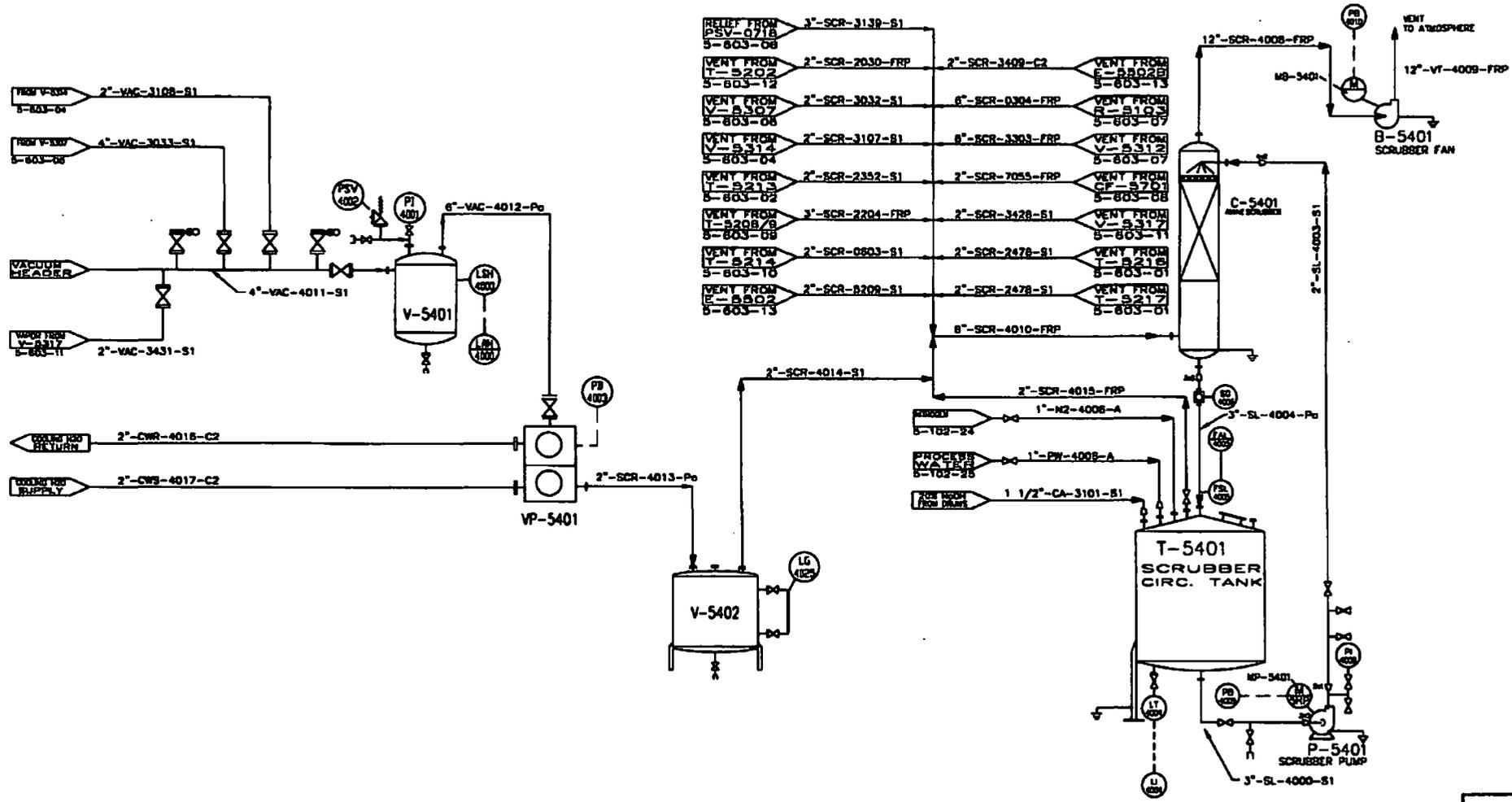
EQ. NO. T-5401
 TYPE TANK
 NAME AMINE SCRUBBER CIRC. TANK
 VENDOR
 MATL PPL
 SIZE 8'0" X 7'-5"
 HP N/A
 RPM N/A
 CAPACITY 1800 GAL
 TEMP AMB.
 PRES. ATM

EQ. NO. P-5401
 TYPE PUMP
 NAME AMINE SCRUBBER CIRC. PUMP
 VENDOR
 MATL 316 SS
 SIZE 2X1-10/100
 HP 5
 RPM 1750
 CAPACITY 75 GPM
 TEMP AMB.
 PRES. 100" TDH

EQ. NO. B-5401
 TYPE FAN
 NAME AMINE SCRUBBER
 VENDOR
 MATL FRP
 SIZE
 HP N/A
 RPM N/A
 CAPACITY 2500 CFM
 TEMP AMB.
 PRES. 12" WC

EQ. NO. C-5401
 TYPE COLUMN
 NAME AMINE SCRUBBER
 VENDOR
 MATL 316 SS
 SIZE 3'-6"0" X 18'-0"
 HP N/A
 RPM N/A
 CAPACITY 2500 CFM
 TEMP AMB.
 PRES. ATM

EQ. NO. C-5402
 TYPE COLUMN
 NAME AMINE SCRUBBER COLUMN
 VENDOR
 MATL
 SIZE
 HP N/A
 RPM N/A
 CAPACITY
 TEMP
 PRES.



NO.	REVISIONS	DATE	BY	CHKD	APPV.	DATE	BY	CHKD	APPV.
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CEDAR CHEM
 CORPORATION
 WEST MELDEN, ARKANSAS

UNIT FIVE

**AVENTIS CYCLANILIDE
 PIPING & INSTRUMENTATION
 VACUUM AND SCRUBBER ST**

SCALE: NONE SHEET: 5-603-14

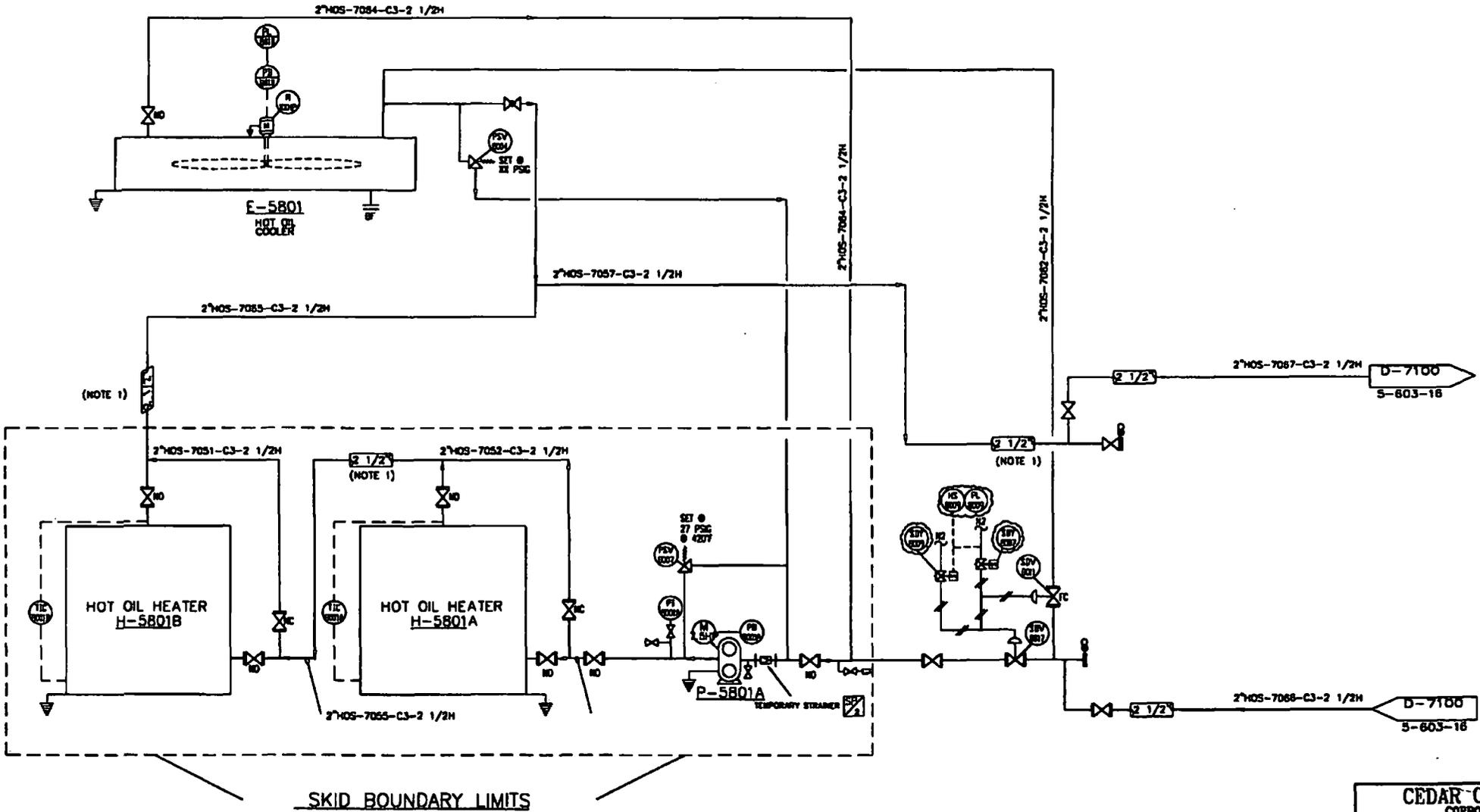
EQ. NO. V-5801
 TYPE TANK
 NAME HOT OIL SURGE TANK
 VENDOR
 MATL 304SS
 SIZE
 HP
 RPM
 CAPACITY 250 GAL.
 TEMP 425F
 PRES. 40PSIG

EQ. NO. P-5801A
 TYPE PUMP
 NAME HOT OIL PUMP
 VENDOR DUCTILE
 MATL
 SIZE
 HP 7.5
 RPM 3500
 CAPACITY 80GPM
 TEMP 420F
 PRES.

EQ. NO. H-5801A
 TYPE EXCHANGER
 NAME HOT OIL HEATER
 VENDOR CHROMAALOX
 MATL SS
 SIZE N/A
 HP N/A
 RPM N/A
 CAPACITY 270,000 BTU/HR
 TEMP NA
 PRES. 20 PSIG

EQ. NO. H-5801B
 TYPE EXCHANGER
 NAME HOT OIL HEATER
 VENDOR CHROMAALOX
 MATL SS
 SIZE N/A
 HP N/A
 RPM N/A
 CAPACITY 270,000 BTU/HR
 TEMP NA
 PRES. 20 PSIG

EQ. NO. E-5801
 TYPE EXCHANGER
 NAME HOT OIL COOLER
 VENDOR HUDSON
 MATL 275 FT BARE
 SIZE
 HP 7
 RPM
 CAPACITY 1.7MM BTU/HR
 TEMP 425 F
 PRES. 25 PSIG



SKID BOUNDARY LIMITS

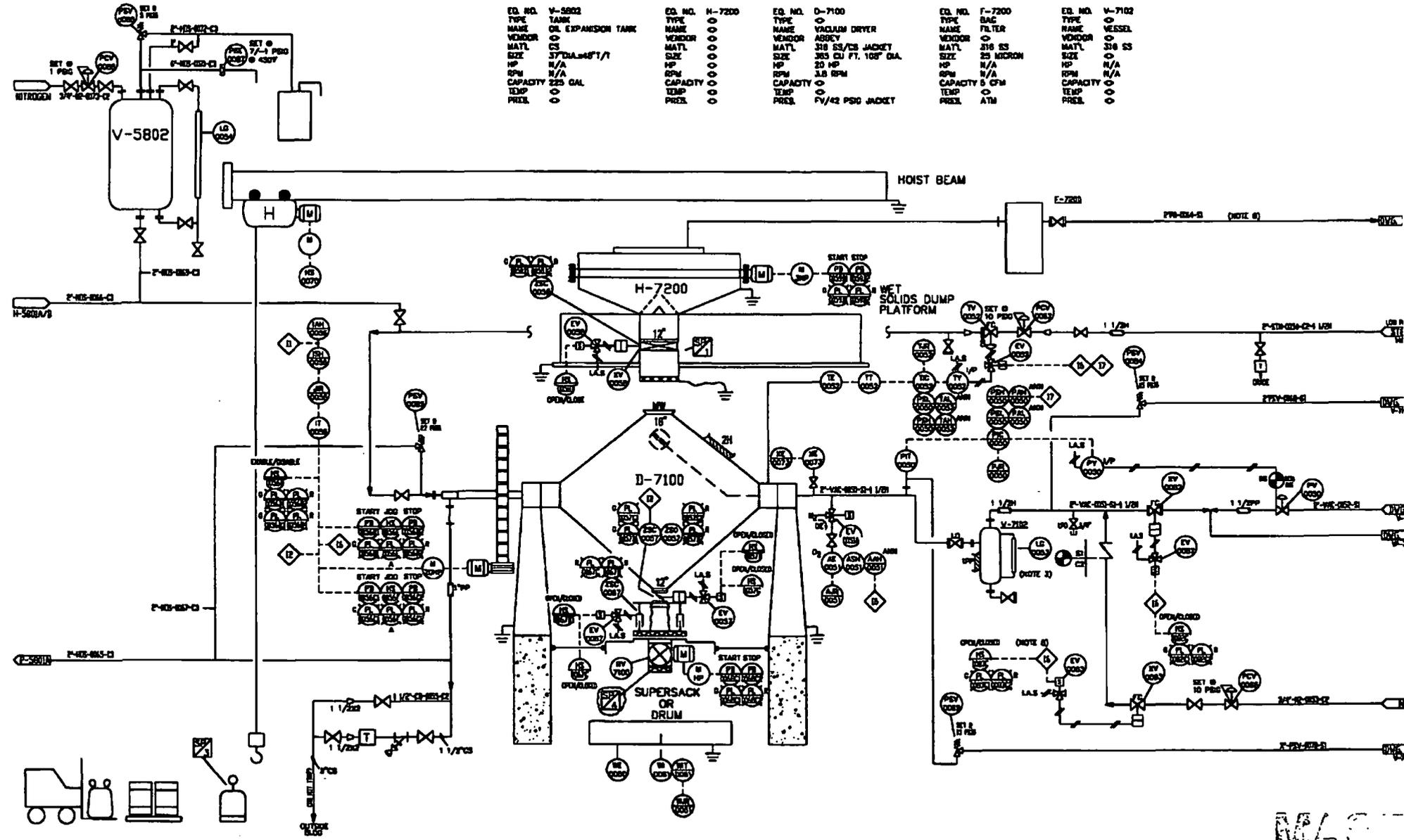
- 1) ALL HOT OIL INSULATION TO BE FIRECLASS 1300.
- 1) VENT TO SAFE LOCATION- ENCLOSE "BUD SKREDA".
- 1) 300g AHEAD SYSTEM

NO.	REVISIONS	DATE	BY	CHKD	APPD	REV	DATE	BY	CHKD	APPD
1	AS BUILT	11/20/00	ALM	EST						
2	GENERAL REVISIONS	8/8/00	TDC							
3	GENERAL REVISIONS	5/8/00	TDC							
4	FOR ENGINEERING	8/4/00	TDC	WSP	WSP					

CEDAR CHEMIC CORPORATION
 WEST HELONA, ARKANSAS
UNIT FIVE
 AVENTIS CYCLANILDE
 PIPING & INSTRUMENTATION D
 HOT OIL SUPPLY/RETURN

SCALE: NONE
 NO. 5-603-15

EQ. NO.	V-5802	EQ. NO.	H-7200	EQ. NO.	D-7100	EQ. NO.	F-7200	EQ. NO.	V-7102
TYPE	TANK	TYPE	DRYER	TYPE	VACUUM DRYER	TYPE	FILTER	TYPE	VESSEL
NAME	OIL EXPANSION TANK	NAME	DRYER	NAME	ASSY	NAME	VEHICLE	NAME	VEHICLE
VENOR	CS	VENOR	CS	VENOR	CS	VENOR	CS	VENOR	CS
MATL	CS	MATL	316 SS/CS JACKET	MATL	316 SS	MATL	316 SS	MATL	316 SS
SIZE	37" DIA x 48" T	SIZE	385 CU FT, 108" DIA	SIZE	25 MICRON	SIZE	N/A	SIZE	N/A
HP	N/A	HP	20 HP	HP	N/A	HP	N/A	HP	N/A
RPM	N/A	RPM	3.8 RPM	RPM	N/A	RPM	N/A	RPM	N/A
CAPACITY	225 GAL	CAPACITY	0	CAPACITY	0	CAPACITY	5 CFM	CAPACITY	0
TEMP	0	TEMP	0	TEMP	0	TEMP	0	TEMP	0
PRES.	0	PRES.	0	PRES.	FV/42 PSIG JACKET	PRES.	ATM	PRES.	0



M.A.C.T.

NOTES

- ALL SLOTS TO BE CARBON FILLED PTFE FOR ELECT. CONDUCTANCE
- ALL CONNECTIONS TO BE ELECTRICALLY BONDED
- LD TO BE PAD-FLANGE STYLE W/CLAMP GLASS
- LOCATED ON MEZZANINE AND GROUND LEVEL
- ROUTE TO SAFE LOCATION
- ROUTE ABOVE ROOF W/RAIN MIT
- 58 PERMISSIVE TOWER @ 30' HGT. & FLANGE @ 50' JTS

INTERLOCK LOGIC

- 11 - HIGH AMP S/D DRIVER MOTOR
- 12 - 220-000V MUST BE SWITCHED TO OPERATE H5-0054A
- 13 - LOW LEVEL STOPS H-7100
- 14 - HIGH LEVEL STARTS H-7100
- 15 - H5-HI LEVEL STOPS H-7100
- 16 - H5-02 CLASSIC VENT. OPEN H2 STOPS VACUUM PUMP, STOPS DRIVER, STOPS HEAT INPUT
- 17 - HIGH PRESS S/D STEAM

SPECIALTY ITEMS

- TRANSITION
- PRELIMINARY LEO SEALER
- DRUM LIFTOR/JUMPER
- SWOCD S/D/T/ER

NO.	REVISIONS	DATE	BY	CHKD	APPR.
1	GENERAL REVISION	10/04/03	ALM	JR	
2	AS BUILT	11/20/00	ALM	REP	
3	GENERAL REVISIONS	8/2/00	TCC		
4	GENERAL REVISIONS	8/5/00	TCC		
5	FOR ENGINEERING	6/16/00	TCC	REP	APPR.

CEDAR CHEMICAL CORPORATION
 VEGETATION MANAGEMENT
 UNIT 5
 AVENTIS CYCLANILIDE
 PIPING & INSTRUMENTATION DIA

DATE: NONE
 NO: 5-603-18

EQ. NO. VP-7100
 TITLE DRY BLAST
 WELDOR WASH
 MATL DUCTILE IRON
 MODEL DP-300
 HP 30
 CAPACITY 230 CFM
 DESIGN 15 TONS

EQ. NO. E-5403
 TITLE DRYER SCRUBBER TANK COOLER
 TYPE SHELL & TUBE
 WELDOR ○
 MATL ○
 SIZE ○
 HP ○
 CAPACITY ○
 TEMP ○
 PRESS ○

EQ. NO. E-5218
 TITLE SCRUBBER
 TYPE CO COOLER
 WELDOR ○
 MATL 316 SS 2" DIA/CS SHELL
 SIZE 120 SQ FT
 HP ○
 CAPACITY ○
 TEMP ○
 PRESS ○

EQ. NO. V-7101
 TITLE VESSEL
 WELDOR ○
 MATL 316 SS
 SIZE ○
 HP ○
 CAPACITY 200 GAL
 TEMP ○
 PRESS ○

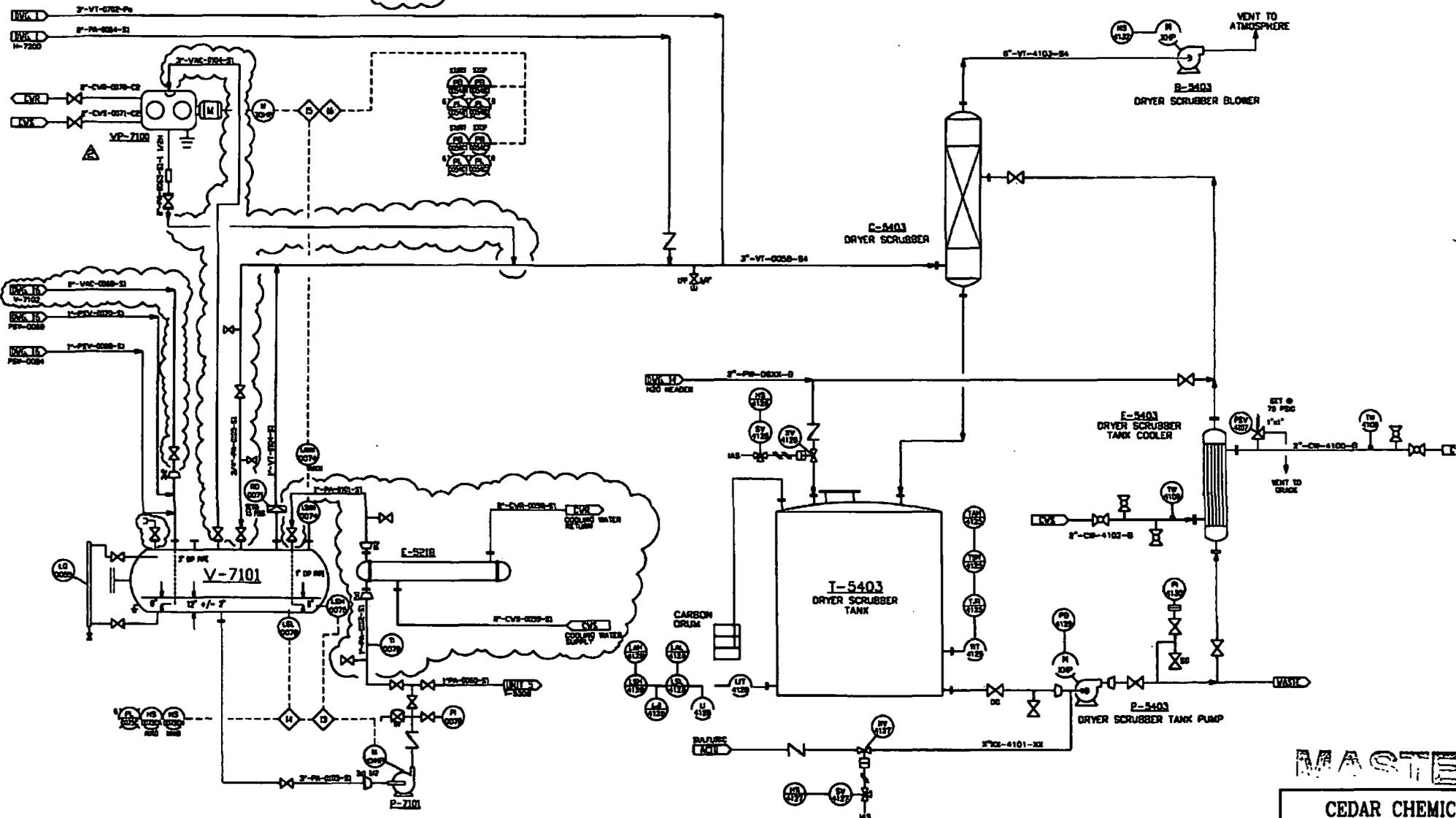
EQ. NO. P-7101
 TITLE CONDENSATE TRANSFER PUMP
 TYPE ○
 WELDOR ○
 MATL 316 SS
 SIZE 1 1/2" DIA
 HP 1.5 HP
 RPM 1720
 CAPACITY 20 GPM @ 45' TDH
 TEMP ○
 PRESS ○

EQ. NO. T-5403
 TITLE DRYER SCRUBBER TANK
 TYPE VERTICAL
 WELDOR ○
 MATL T3P
 SIZE 5'0" x 7'-0" SSH
 HP N/A
 RPM N/A
 CAPACITY 1,000 GAL
 TEMP ○
 PRESS ○

EQ. NO. C-5403
 TITLE DRYER SCRUBBER
 TYPE VERTICAL
 WELDOR ○
 MATL 316L/316 SS PRO
 SIZE 18" DIA, 25' DIA
 HP N/A
 RPM N/A
 CAPACITY 1,000 GAL
 TEMP 330 F DESIGN
 PRESS 30 PSIG DESIGN

EQ. NO. P-5403
 TITLE DRYER SCRUBBER TANK PUMP
 TYPE ○
 WELDOR ○
 MATL ○
 SIZE ○
 HP ○
 CAPACITY ○
 TEMP ○
 PRESS ○

EQ. NO. B-5403
 TITLE DRYER SCRUBBER BLOWER
 TYPE PRESSURE BLOWER
 WELDOR ACCIDENT
 MATL F7P
 SIZE 18"
 HP 2400 RPM
 CAPACITY 200 CFM @ 12" WC SUCTIO
 TEMP 100°F
 PRESS 17" WC



WASTE

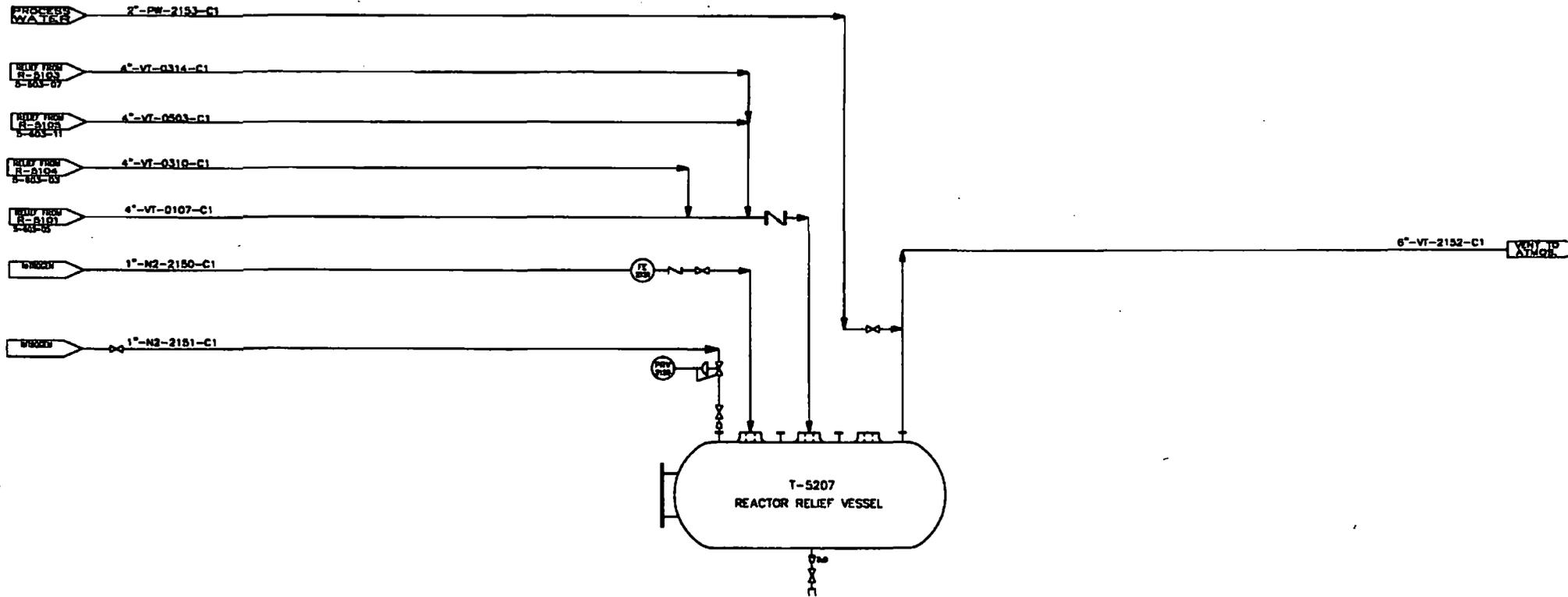
CEDAR CHEM. CORPORATION
 WEST KENNESA, WASHINGTON

UNIT
 AVENTIS CYCLANILIDE
 PIPING & INSTRUMENTATION

NO.	REVISIONS	DATE	BY	CHKD	APPRD
1	ADDITION OF E-5218 AND V-7101 MODIFICATIONS	11/12/00	ALM	DM	DM
2	CONDENSER VAPOR LINE ADDITION	12/12/00	ALM	DM	DM
3	AS BUILT	11/20/00	ALM	DM	DM
4	VP-7100 CHANGE	9/13/00	SD		
5	GENERAL REVISIONS	8/5/00	TDC		
6	FOR DIMENSIONS	6/8/00	TDC	MDP	MDP

SCALE NONE
 SHEET 5-603-17

EQ. NO. T-5207
 TYPE VESSEL
 NAME REACTOR RELIEF VESSEL
 VENDOR Taylor - Forge
 MATL 316 SS
 SIZE STD = 15'
 HP N/A
 RPM N/A
 CAPACITY 2200 GAL
 TEMP 40 C
 PRES. 1100 PSIG



CEDAR CHEMIC CORPORATION
 WEST HELIX, MISSOURI

UNIT FIVE

AVENTIS CYCLANILIDE
 PIPING & INSTRUMENTATION D
 VENT CONDENSER & RELIEF V

SCALE NONE
 DRAWING NO. S-603-18

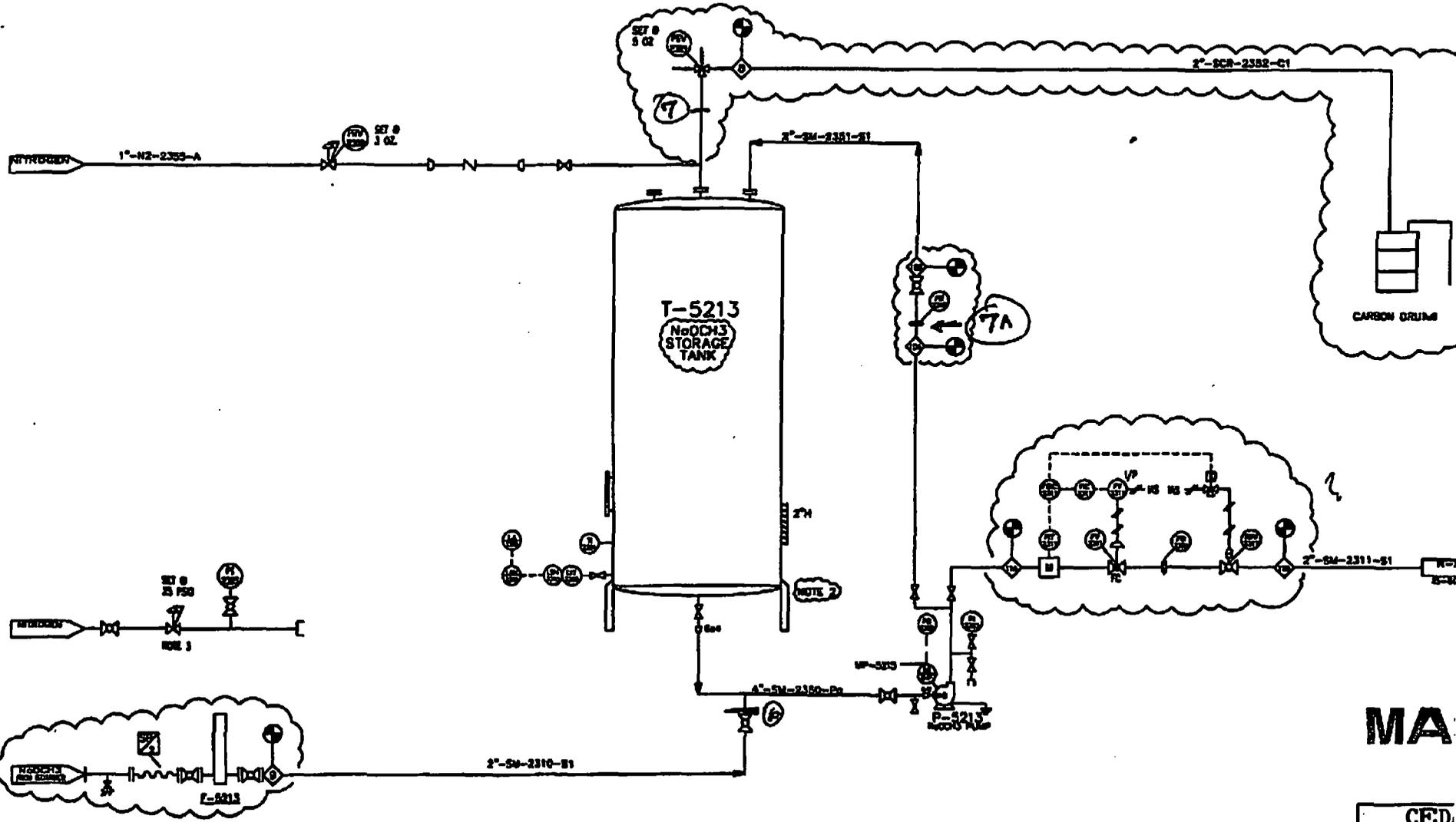
NO.	REVISIONS	DATE	BY	CHKD	APPV	DATE
1	AS BUILT	11/20/00	ALM	MSF	CHS	6/2/00
2	GENERAL REVISIONS	5/2/00	TCG			
3	FOR ENGINEERING	6/1/00	TCG	MSF	APPV	

THIS DRAWING AND THE INFORMATION IT CONTAINS
 ARE THE PROPERTY OF CEDAR CHEMIC CORPORATION

EQ. NO. T-5213
 TYPE TANK
 NAME NaOCH3 STORAGE TANK
 VENDOR O
 MATL. 316SS
 SIZE -
 HP N/A
 RPM N/A
 CAPACITY 10,000 GAL
 TEMP 10 C
 PRES. ATM

EQ. NO. P-5213
 TYPE PUMP
 NAME NaOCH3 PUMP
 VENDOR DURCO
 MATL. 316 SS
 SIZE 2 x 2R-10/80
 HP 10
 RPM 1750
 CAPACITY 60 CPM
 TEMP 10 C
 PRES. 68" TQH

EQ. NO. F-5213
 TYPE FILTER
 NAME CARTRIDGE FILTER
 VENDOR O
 MATL. 316SS
 SIZE 2"x2"
 HP N/A
 RPM N/A
 CAPACITY 5 MICRON FILTERS
 TEMP
 PRES.



- NOTES:
- SEE DRAWING OF TANK LEGS
 - STREAM TRACING TO BE DONE & LINES TO BE DISCONNECTED, DRAINED, AND FLOODED.
 - SEE DRAWING OF BURNER CALIBRATION SPOT.

NO.	REVISION	DATE	BY	DESCRIPTION
1	AS BUILT	01/20/00	ALM/MP	ISSUED FOR CONSTRUCTION
2	GENERAL REVISION	02/18/00	ALM/MP	ISSUED FOR CONSTRUCTION
3	GENERAL REVISION	03/01/00	ISS	ISSUED FOR CONSTRUCTION

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SODIUM MET

DATE: NONE | 03-0

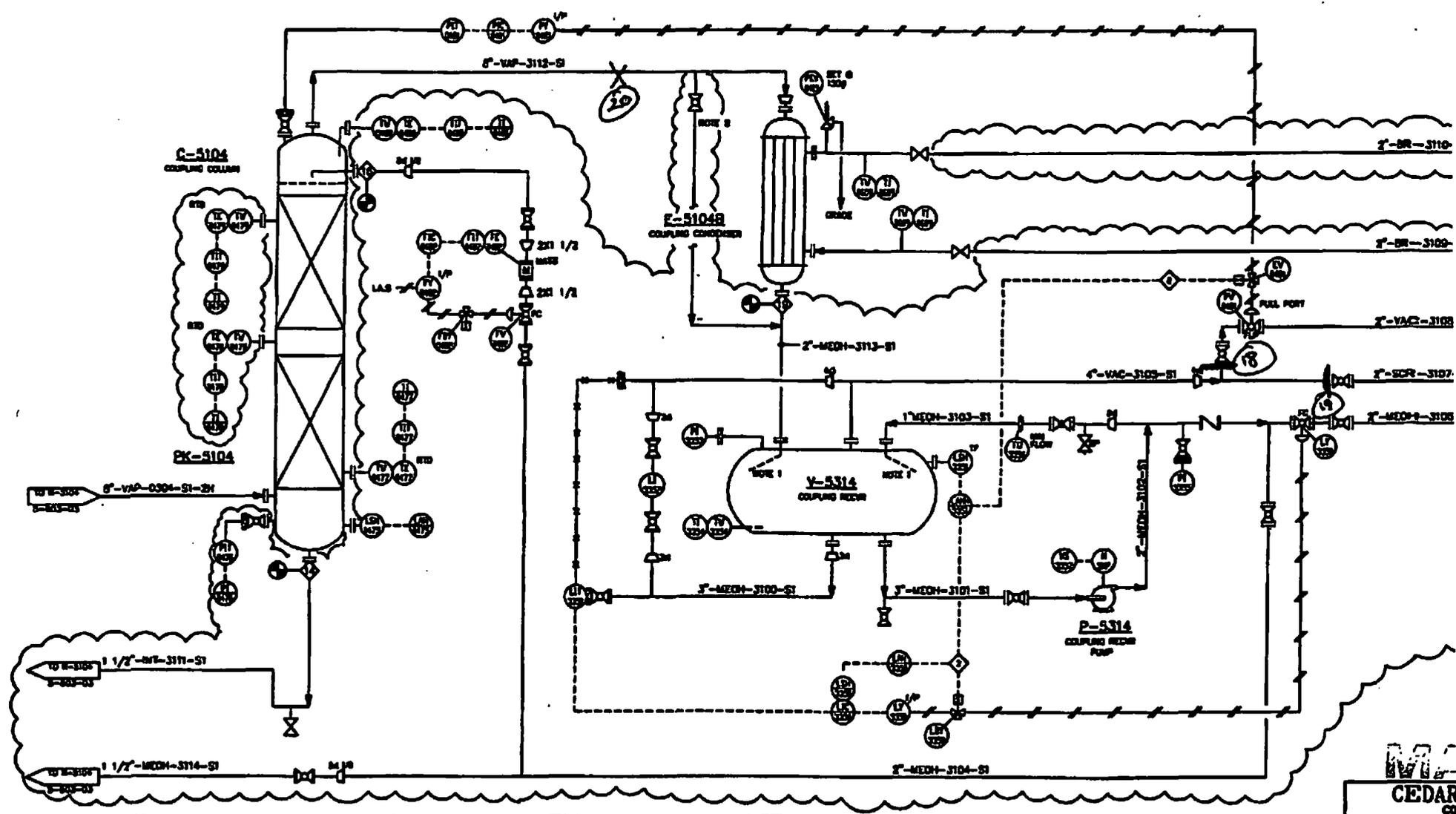
EQ. NO. C-5104
 TYPE VERTICAL
 NAME COUPLING COLUMN
 VENDOR
 MATL. 316 SS
 SIZE 23.5" DIA. x 7'-7"
 HP
 RPM
 CAPACITY
 TEMP.
 PRES.

EQ. NO. PK-5104
 TYPE 17 STRUCTURED
 NAME COUPLING COLUMN PACKING
 VENDOR NORTON
 MATL. 304L SS
 SIZE
 HP
 RPM
 CAPACITY
 TEMP.
 PRES.

EQ. NO. E-5104B
 TYPE SHELL/TUBE
 NAME COUPLING CONDENSER
 VENDOR
 MATL. SS/SS
 SIZE
 HP
 RPM
 CAPACITY
 TEMP.
 PRES.

EQ. NO. V-5314
 TYPE VERTICAL
 NAME COUPLING RECEIVER
 VENDOR
 MATL. 316 SS
 SIZE
 HP
 RPM
 CAPACITY 500 GAL
 TEMP.
 PRES. 30 PSIG/VV

EQ. NO. P-5314
 TYPE CENTRIFUGAL
 NAME COUPLING RECVR PUMP
 VENDOR CURCO
 MATL. 316 SS
 SIZE 3" x 10"
 HP
 RPM 1750
 CAPACITY 40 GPM
 TEMP.
 PRES. 60 FT



NOTES:
 1. INSTALL 45° SPLASH LEG DIRECTING FLOW AGAINST VESSEL WALL.
 2. LOW PORT ORAIN

INTERLOCK LOGIC:
 2. PV-0505 CLOSES ON HIGH LEVEL.
 3. PV-0517 OPENS ON HIGH LEVEL.

NO.	DESCRIPTION	DATE	BY	CHKD	APPRD
1	AS BUILT	01/23/03	WJL	WJL	
2	ORIGINAL REVISIONS	10/18/00	ALM	WJL	
3	ORIGINAL REVISIONS	08/01/00	WJL	WJL	
4	FOR ENGINEERING	6/16/00	WJL	WJL	

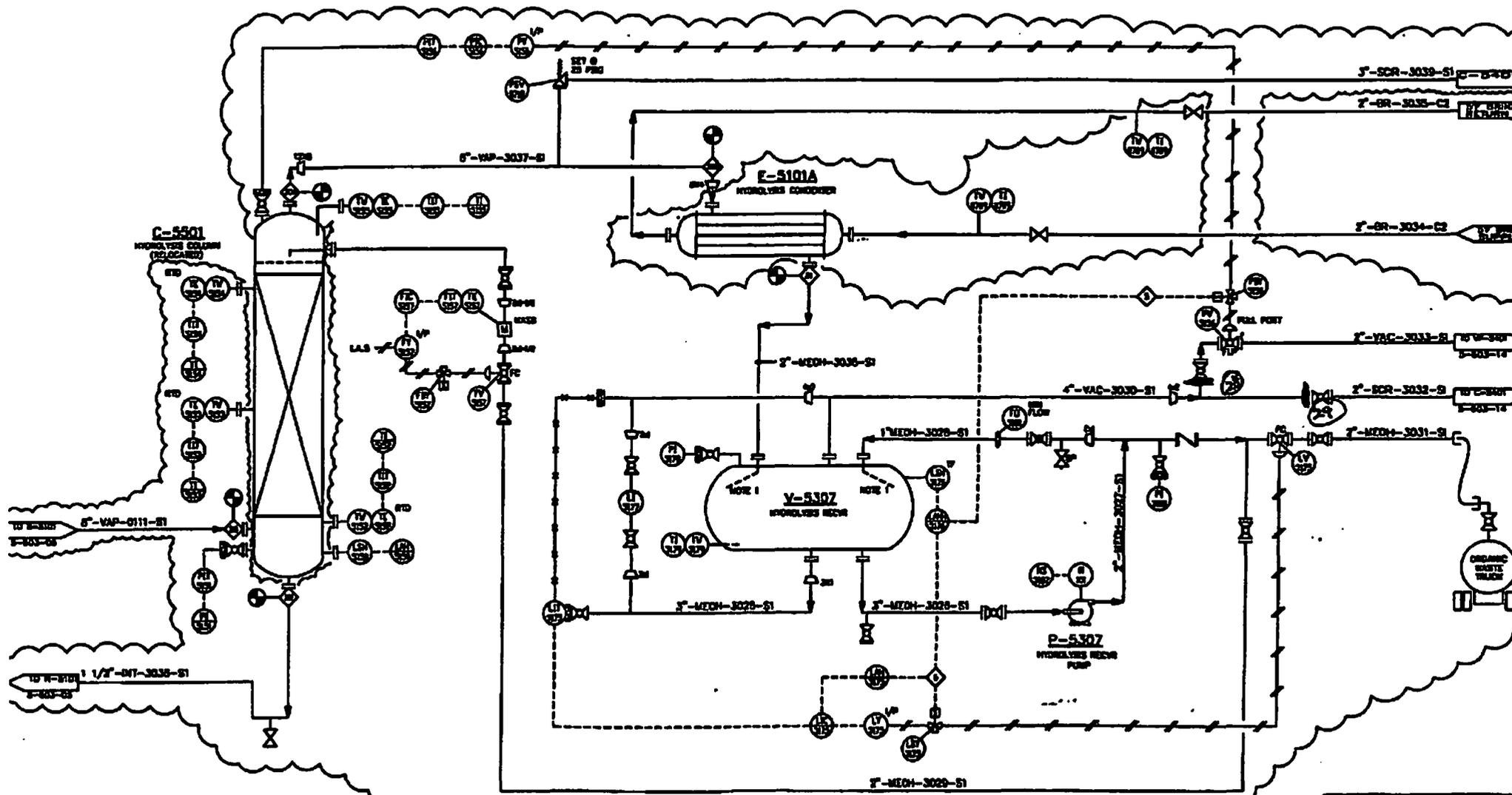
MCD
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 VESSEL
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AVENTIS
 PIPING & INSTRUMENTATION
 COUPLING
 SIZE: NONE
 TAG: S-603

ED. NO. C-5501
 TYPE VERTICAL
 NAME HYDROLYSIS COLUMN
 VENDOR ES
 MATL SS
 SIZE 36"
 HP 100
 RPM CAPACITY
 TEMP
 PRES.

ED. NO. E-5101A
 TYPE SHELL/TUBE
 NAME HYDROLYSIS CONDENSER
 VENDOR ES
 MATL SS/SS
 SIZE 140 SQ. FT.
 HP
 RPM CAPACITY
 TEMP
 PRES.

ED. NO. V-5307
 TYPE VERTICAL
 NAME HYDROLYSIS RECVR
 VENDOR ES
 MATL 316L SS
 SIZE 36"
 HP 600
 RPM CAPACITY
 TEMP 300F
 PRES. 25 PSIG/PV

ED. NO. P-5307
 TYPE CENTRIFUGAL
 NAME HYDROLYSIS RECVR PUMP
 VENDOR CHESTER
 MATL 316 SS
 SIZE 3/4 1/2x10
 HP 7 1/2
 RPM 1750
 CAPACITY 80 GPM
 TEMP 120F
 PRES. 100 FT



STALL 45° SPLASH LED DIRECTING FLOW AGAINST VESSEL WALL

INTERLOCK LOGIC

- 1. PV-0708 CLOSING ON HIGH LEVEL
- 2. PV-0717 OPENS ON HIGH LEVEL

NO.	REVISIONS	DATE	BY	APPROVED
1				
2				
3				
4				
5				
6				
7				
8				
9				
10				

CEDAR CHEMICAL CORPORATION
 VERY HIGH Purity Hydrolysis
 DIST. FIVE
 AVANTIS CYCLANOLIDE
 PIPING & INSTRUMENTATION OF
 HYDROLYSIS DISTILLATION

DATE: 8/20/00
 DRAWN BY: [Signature]
 CHECKED BY: [Signature]
 APPROVED BY: [Signature]

SCALE: NONE | 8-803-06

EQ. NO.	P-5103B
TYPE	DIAPHRAGM PUMP
NAME	F.A. PUMP
VENDOR	WILDM
MATL.	○
SIZE	○
HP	○
RPM	○
CAPACITY	○
TEMP	○
PRES.	○

EQ. NO.	R-5103
TYPE	REACTOR
NAME	PRECIPITATION
VENDOR	○
MATL.	○
SIZE	30" x 5'
HP	N/A
RPM	N/A
CAPACITY	3000 GAL
TEMP	60 C
PRES.	ATM

EQ. NO.	A-5103
TYPE	AGT
NAME	PRECIPITATION
VENDOR	○
MATL.	316 SS
SIZE	○
HP	○
RPM	○
CAPACITY	N/A
TEMP	60 C
PRES.	ATM

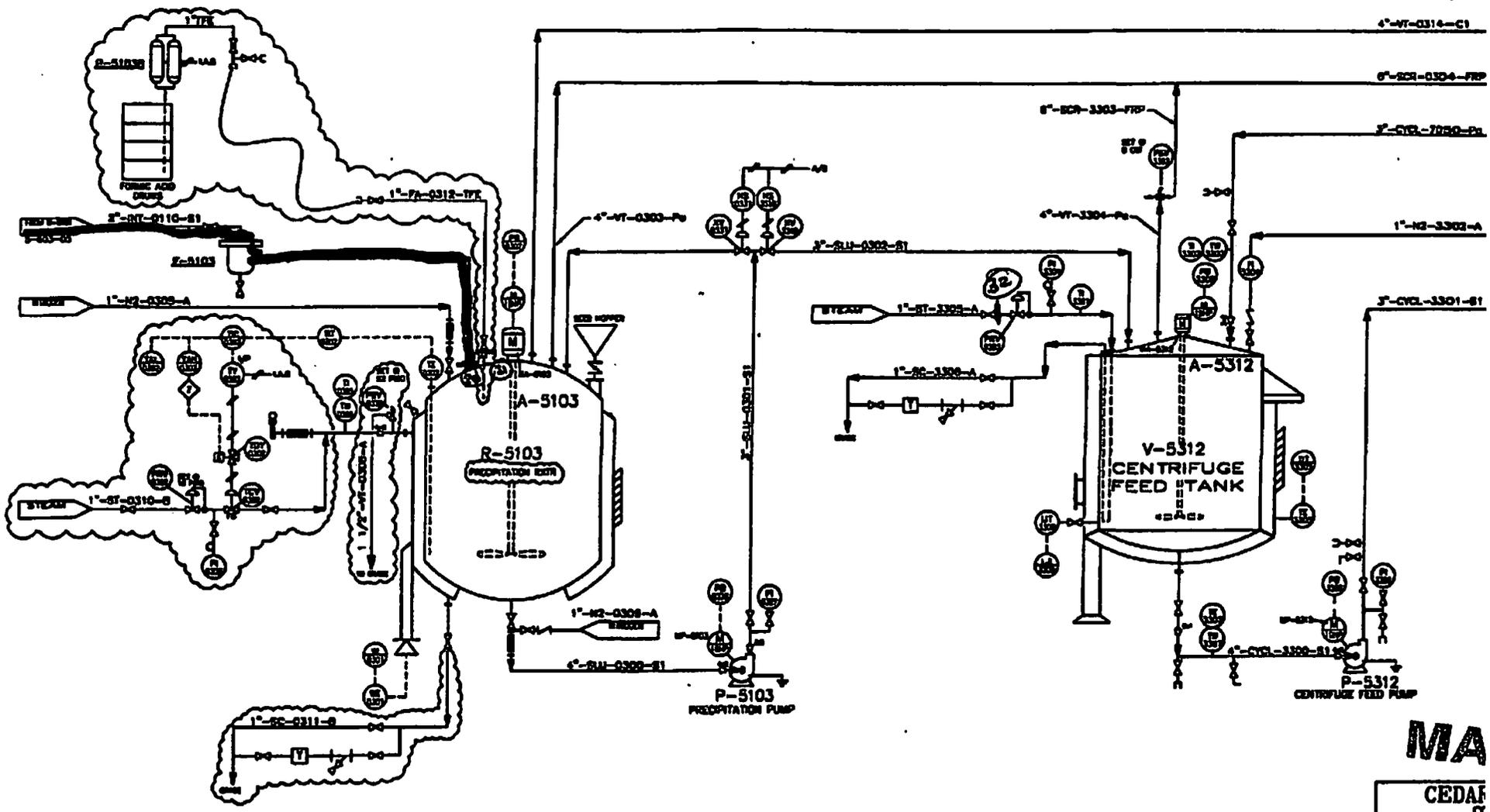
EQ. NO.	P-5103
TYPE	SLURRY PUMP
NAME	PRECIPITATION PUMP
VENDOR	DURCO
MATL.	316 SS
SIZE	3" x 2R-10/70
HP	10
RPM	1750
CAPACITY	200 GPM
TEMP	10 C
PRES.	65" TDH

EQ. NO.	F-5103
TYPE	BAG FILTER
NAME	FILTER
VENDOR	○
MATL.	316 SS
SIZE	200 MICRON
HP	N/A
RPM	N/A
CAPACITY	○
TEMP	○
PRES.	○

EQ. NO.	V-5312
TYPE	TANK
NAME	CENTRIFUGE FEED TANK
VENDOR	○
MATL.	SS
SIZE	9"0 x 6'-3"
HP	N/A
RPM	N/A
CAPACITY	5000 GAL
TEMP	10 C
PRES.	ATM

EQ. NO.	F-5312
TYPE	PUMP
NAME	CENTRIFUGE FEED PUMP
VENDOR	DURCO
MATL.	316 SS
SIZE	3" x 2R-10/90
HP	10
RPM	1750
CAPACITY	200 GPM
TEMP	10 C
PRES.	50" TDH

0 T
1 M
2 M
3 M
4 H
5 R
6 C
7 F



INSTRUMENT LOGS
2. 100-0308 CLOSED ON HIGH TEMP

NO.	REVISION	DATE	BY	CHKD.	APP.
1					
2					
3					
4					
5					
6					
7					
8					
9					
10					

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CENTRIFUGE FEED TANK

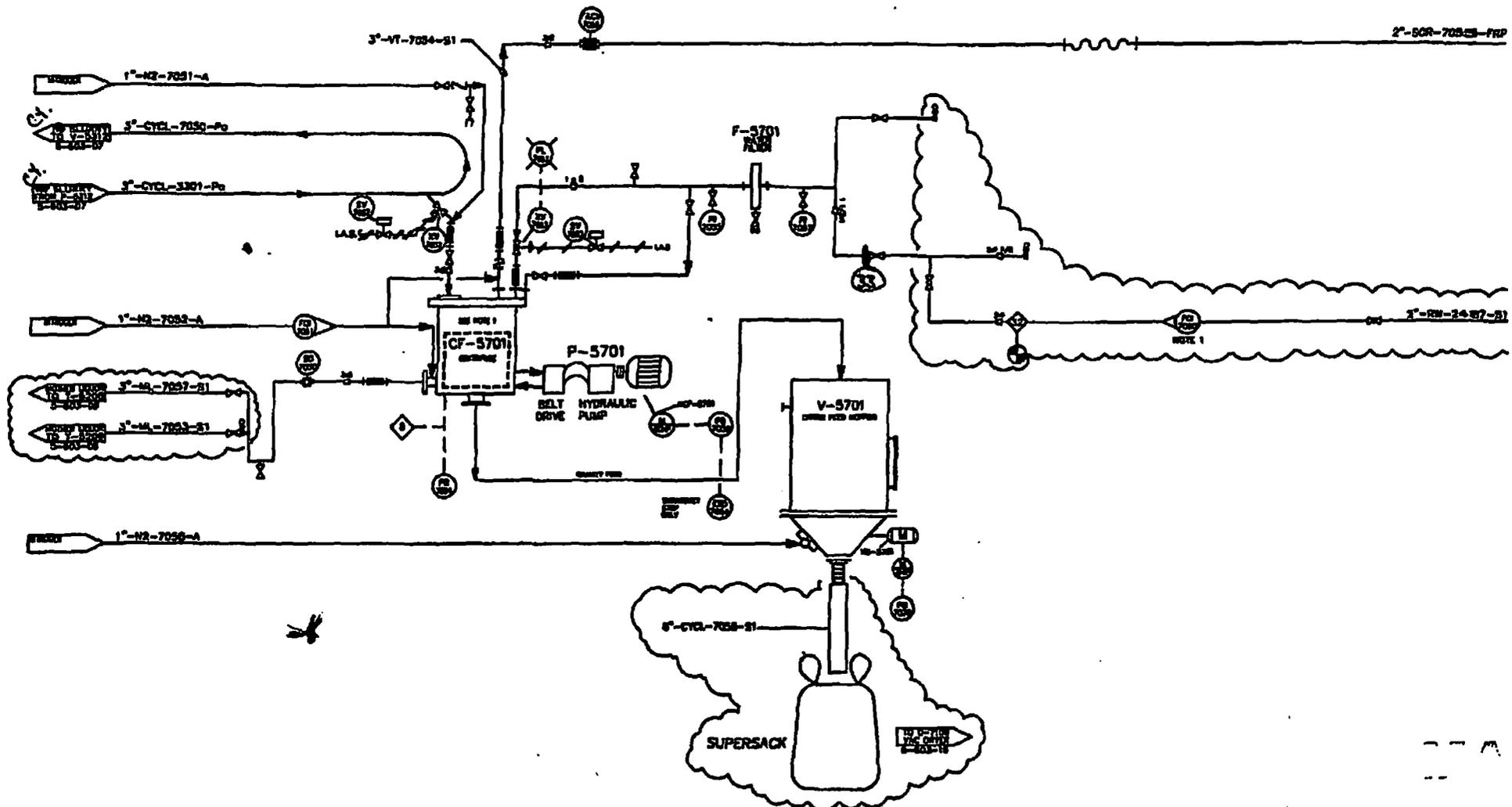
AVENTS
PIPING & INSTR
PRECIPITATION

DATE: NONE
REV: 5-603

ED. NO. CF-5701
 TYPE CENTRIFUGE
 NAME SHARPLES
 MFG. 304 SS
 SIZE 48" x 30"
 HP 80
 RPM 900
 CAPACITY 18 CU. FT.
 TEMP TO C
 PRES. ATM

ED. NO. F-5701
 TYPE CARTRIDGE
 NAME WATER FILTER
 MFG. COMMERCIAL FILTERS
 MFG. MODEL 655300-1/430
 SIZE 7" DIA x 25"
 HP N/A
 RPM N/A
 CAPACITY 0
 TEMP 175 PS @ 200 F
 PRES. 150 PS @ 250 F

ED. NO. V-5701
 TYPE HOPPER
 NAME ORNER FEED HOPPER
 MFG. 304 SS
 SIZE 70" x 4"
 HP 2
 RPM N/A
 CAPACITY 25 CU. FT.
 TEMP AMB.
 PRES. ATM



INTERLOCK LOG:
 (3) CF-5701 WILL SHUT DOWN WHEN OUT OF BALANCE.

HOTO:
 1. ACCESSIBLE FROM CENTRIFUGE

NO.	REVISIONS	DATE	BY	CHKD	APPROV
1	AS BUILT	11/20/88	AW	AWP	
2	GENERAL REVISIONS	10/18/89	AW	AWP	
3	GENERAL REVISIONS	8/22/89	AW	AWP	
4	FOR DIMENSIONS	1/2/88	AW	AWP	

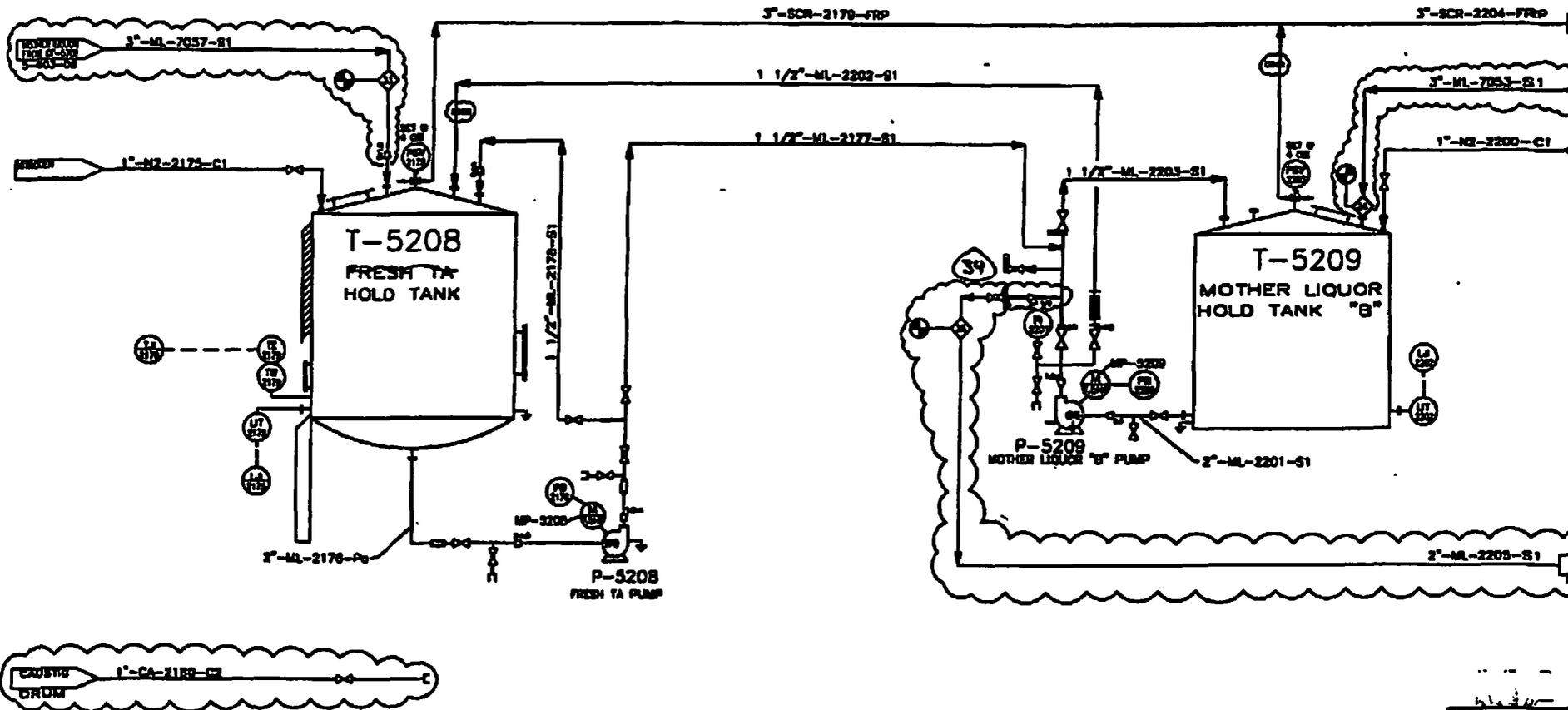
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 CENTRIFUGATION,
 NONE | 5-603

EQ. NO. T-5208
 TYPE TANK
 NAME FRESH TA HOLD
 VENDOR C
 MATL 316 SS
 SIZE 9'0" x 8'
 HP N/A
 RPM N/A
 CAPACITY 4000 GAL
 TEMP 80 C
 PRES ATM

EQ. NO. P-5208
 TYPE PUMP
 NAME FRESH TA
 VENDOR DUNCO
 MATL 316 SS
 SIZE 1.5 x 1-8/70
 HP 7.5
 RPM 3600
 CAPACITY 10 GPM
 TEMP 80 C
 PRES 200' TDH

EQ. NO. T-5209
 TYPE TANK
 NAME MOTHER LIQUOR HOLD
 VENDOR C
 MATL 304 SS
 SIZE 7'-0"0 x 14'-0"
 HP N/A
 RPM N/A
 CAPACITY 4000 GAL
 TEMP AMS
 PRES ATM

EQ. NO. P-5209
 TYPE PUMP
 NAME MOTHER LIQUOR
 VENDOR DUNCO
 MATL 316 SS
 SIZE 1.5 x 1-8/74
 HP 7.5
 RPM 1750
 CAPACITY 10 GPM
 TEMP AMS
 PRES 80' TDH



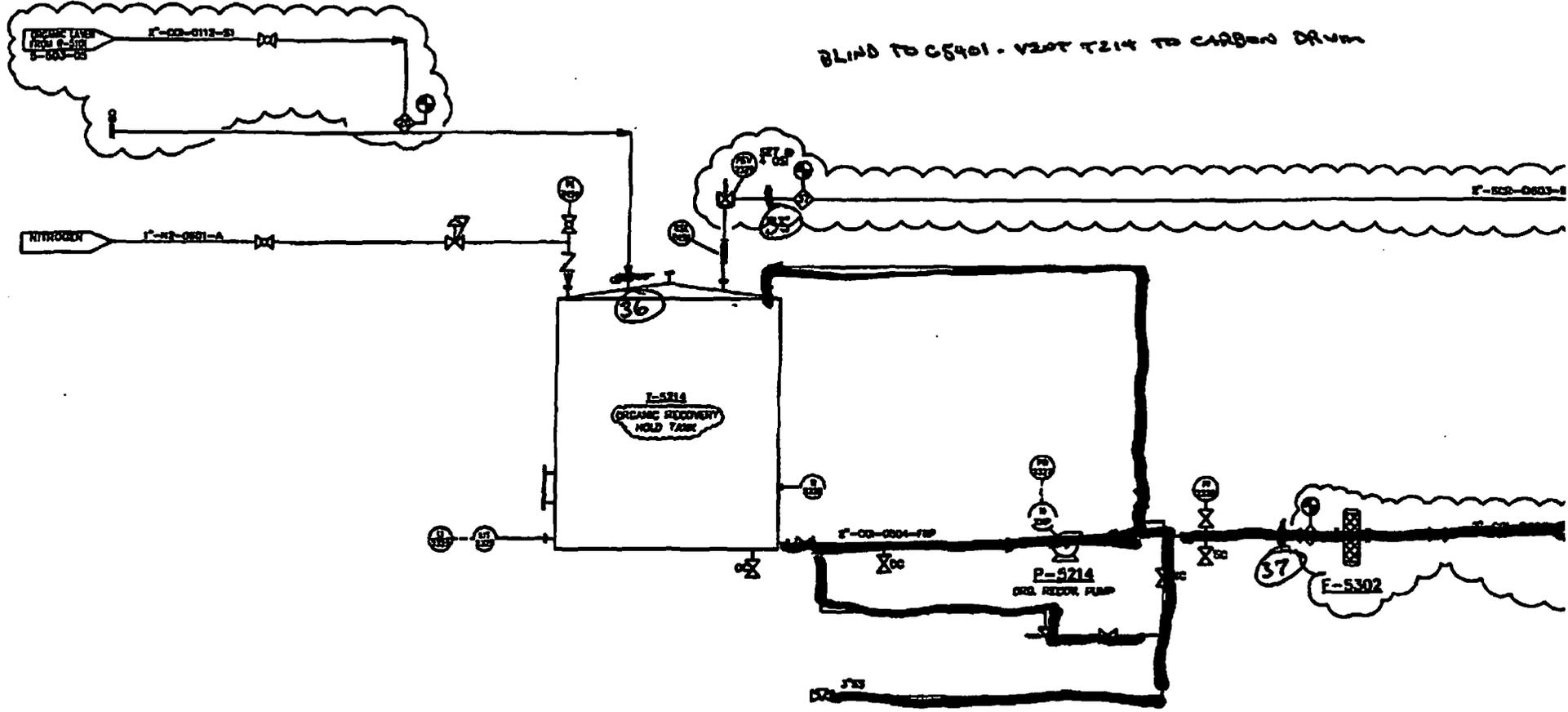
NO.	REVISION	DATE	BY	CHKD	APP'D
1	AS BUILT	11/29/80	ALB	WRE	
2	GENERAL REVISION	10/18/80	ALB	WRE	
3	GENERAL REVISION	8/15/80	WRE		
4	FOR OPERATING	6/8/80	WRE		

11-24-80
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 PIPING & INSTR
 FRESH TA & ML
 EQ. NONE
 5-603-

EQ. NO. T-5214
 TITLE ORG. RECON. HOLD TANK
 TYPE VERTICAL
 VERSION
 MATL. CS LINED
 SIZE 60"
 HP 0
 RPM 0
 CAPACITY 17,000 GAL.
 TEMP 0
 PRES. 0

EQ. NO. P-5214
 TITLE ORG. RECON. PUMP
 TYPE CENTRIFUGAL
 VERSION 50000 MARK I
 MATL. SS SS
 SIZE 3 1/2 LS - 8
 HP 1800
 RPM 1400
 CAPACITY 140 GPM
 TEMP 0
 PRES. 100' TDH

EQ. NO. F-5302
 TITLE ORGANIC RECON. PUMP
 TYPE CARTRIDGE
 VERSION
 MATL. SS SS
 SIZE 100 HORIZ.
 HP 0
 RPM 0
 CAPACITY 0
 TEMP 0
 PRES. 0



NO.	DESCRIPTION	DATE	BY	CHKD	STATUS

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 ORGANIC RECON
 5-603

EQ. NO. P-5105
 TYPE PUMP
 NAME SOLV. REC. WASTE PUMP
 VENDOR DURCO
 MATL. 316 SS
 SIZE 3 x 1.5-8/74
 HP 3
 RPM 1750
 CAPACITY 100 GPM
 TEMP 100 C
 PRES. 50" TDH

EQ. NO. R-5105
 TYPE REACT.
 NAME SOLV. REC. POT
 VENDOR O
 MATL. C.S.
 SIZE 8'-0" x 8'-3"
 HP N/A
 RPM N/A
 CAPACITY 4000 GAL.
 TEMP 100 C
 PRES. ATM

EQ. NO. E-5105
 TYPE EXCH.
 NAME SOLV. REC. COND.
 VENDOR O
 MATL. 304 SS
 SIZE 130 S.F.
 HP N/A
 RPM N/A
 MM BTUH 0000
 TEMP 65 C
 PRES. 75 PSIG

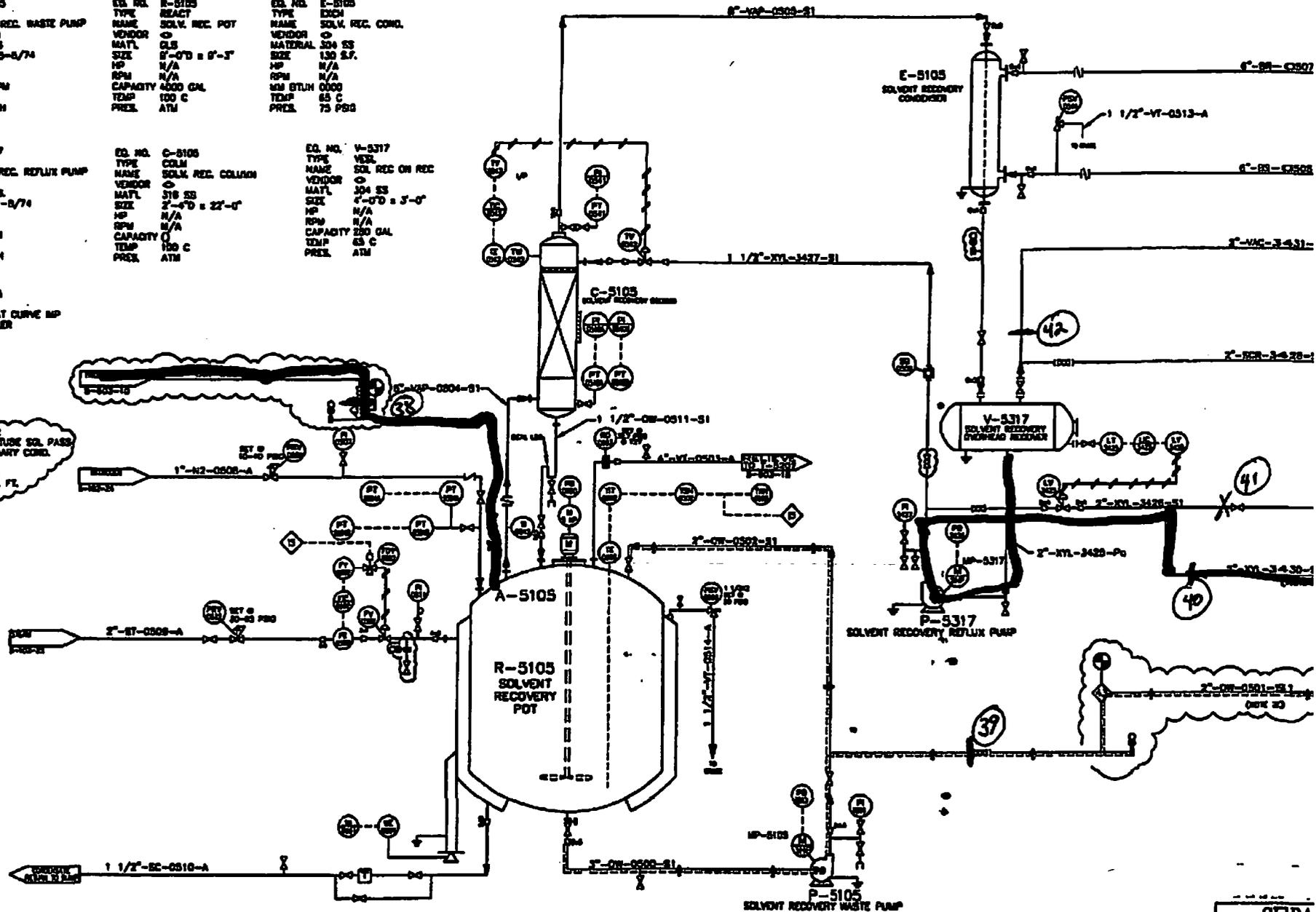
EQ. NO. P-5317
 TYPE PUMP
 NAME SOLV. REC. REFLUX PUMP
 VENDOR DURCO
 MATL. 316 S.S.
 SIZE 1.5 x 1-8/74
 HP 2
 RPM 1750
 CAPACITY 20 GPM
 TEMP 50 C
 PRES. 50" TDH

EQ. NO. C-5105
 TYPE COLM.
 NAME SOLV. REC. COLUMN
 VENDOR O
 MATL. 316 SS
 SIZE 2'-0" x 22'-0"
 HP N/A
 RPM N/A
 CAPACITY 0
 TEMP 100 C
 PRES. ATM

EQ. NO. V-5317
 TYPE VES.
 NAME SOL. REC. ON REC.
 VENDOR O
 MATL. 304 SS
 SIZE 2'-0" x 5'-0"
 HP N/A
 RPM N/A
 CAPACITY 250 GAL.
 TEMP 65 C
 PRES. ATM

EQ. NO. A-5105
 TYPE SBTW
 NAME REPEAT CURVE MP
 VENDOR FRAIGLER
 MATL. GLASS
 SIZE 55
 HP 55
 RPM
 CAPACITY
 TEMP
 PRES.

EQ. NO. K-5702
 TYPE SHLL/TUBE SOL. PASS.
 NAME SECONDARY COND.
 VENDOR O
 MATL. 304 SS
 SIZE 100 SQ. FT.
 HP
 RPM
 CAPACITY
 TEMP
 PRES.



REVISION LOGS

1. 10/14/03 REVISIONS
 2. 10/14/03 REVISIONS

NOTES

1. EXISTING LINE
 2. STEAM TRACE & REPAIR ALL CW & CSW PIPING

NO.	DATE	BY	CHKD.	APP.	DESCRIPTION
1	10/14/03	ALM	WSP		GENERAL REVISIONS
2	10/14/03	ALM	WSP		GENERAL REVISIONS
3	10/14/03	ALM	WSP		GENERAL REVISIONS

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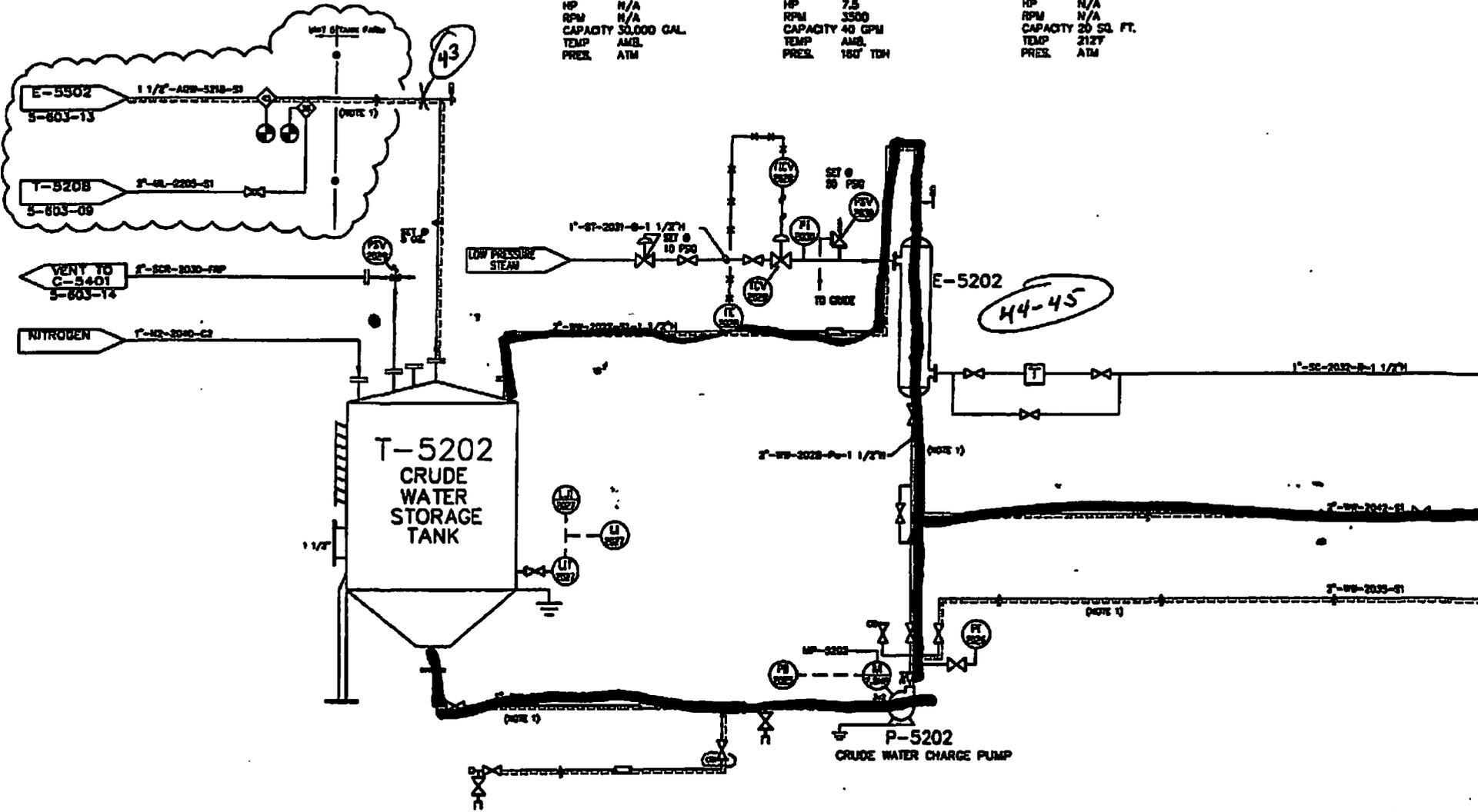
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13-42

EQ. NO. T-5202
 TYPE TANK
 NAME CRUDE WATER STG. TANK
 VENDOR Ⓞ
 MATL. 316SS
 SIZE 12' X 36'H
 HP N/A
 RPM N/A
 CAPACITY 30,000 GAL.
 TEMP AMB.
 PRES. ATM

EQ. NO. P-5202
 TYPE PUMP
 NAME CRUDE WATER CHG. PUMP
 VENDOR DURCO
 MATL. 316 SS
 SIZE 1.5 X 1-6/8
 HP 7.5
 RPM 3500
 CAPACITY 40 GPM
 TEMP AMB.
 PRES. 160' TDH

EQ. NO. E-5202
 TYPE DOUBLE PIPE
 NAME CRUDE WATER STL. TANK HEATER
 VENDOR Ⓞ
 MATL. 316SS/C.S.
 SIZE N/A
 HP N/A
 RPM N/A
 CAPACITY 20 SQ. FT.
 TEMP 212°F
 PRES. ATM



NOTE:
 (1) STEAM TRACING USED FOR FREEZE PROTECTION ONLY

NO.	REVISIONS	DATE	BY	CHKD	APPV	REV	DATE	BY	CHKD	APPV
1	AS SHOWN	11/05/00	MM			0000	100	000000		
2	AS SHOWN	12/05/00	MM			0000	100	000000		
3	AS SHOWN	02/10/00	MM			0000	100	000000		

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AVENUE
 PIPING & INSTR
 RAW MATERIAL

SCALE
 1/4" = 1'-0"

ED. NO. V-5401
 TYPE VESSEL
 NAME VACUUM PUMP K.O. POT
 VENDOR
 MATL SS
 SIZE N/A
 HP N/A
 RPM N/A
 CAPACITY 500 GAL
 TEMP AMB.
 PRES. FULL VACUUM

ED. NO. V-5402
 TYPE VESSEL
 NAME VACUUM EXHAUST K.O. POT
 VENDOR
 MATL SS
 SIZE N/A
 HP N/A
 RPM N/A
 CAPACITY 300 GAL
 TEMP AMB.
 PRES. ATM

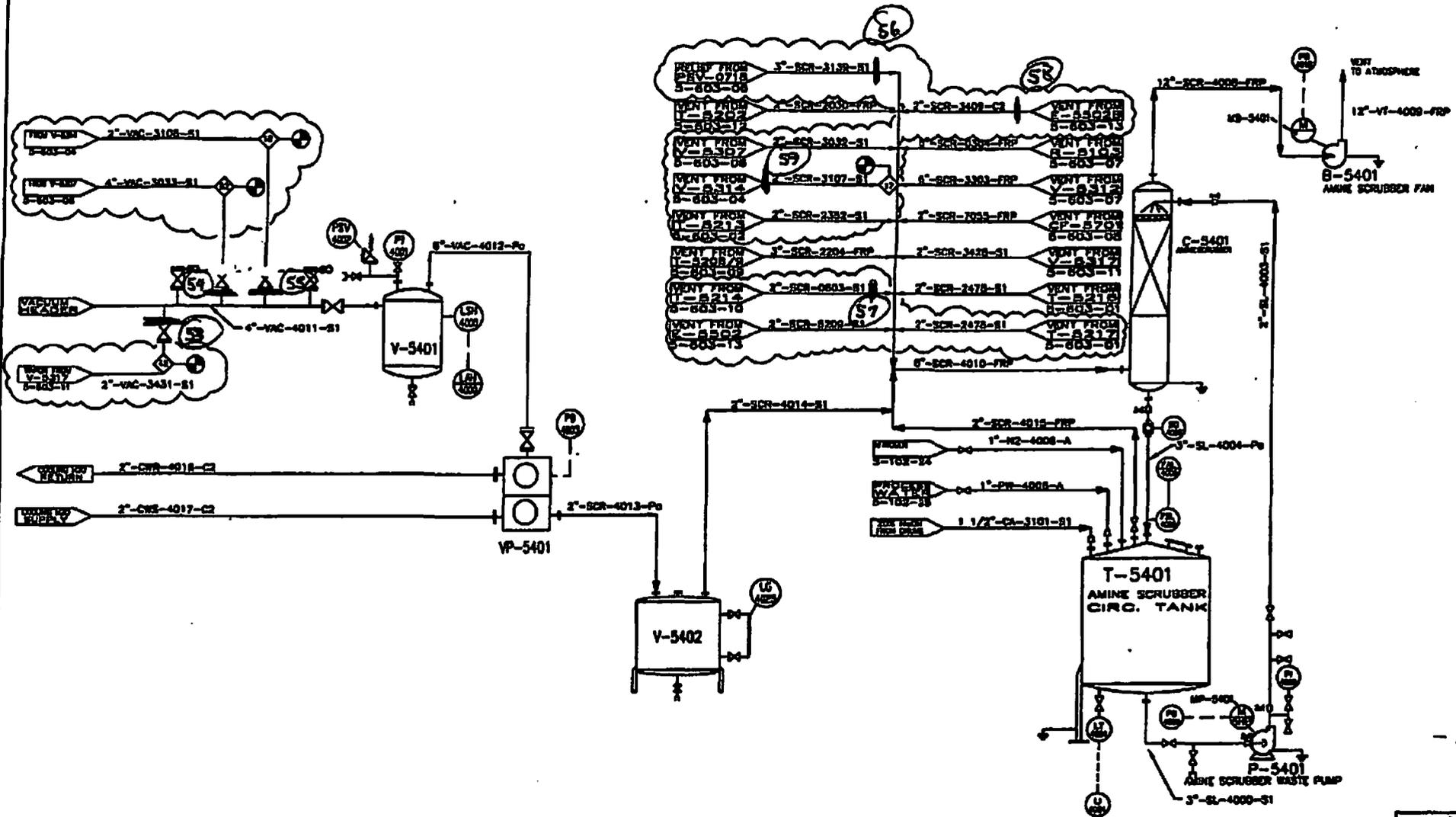
ED. NO. T-5401
 TYPE TANK
 NAME AMINE SCRUBBER CIRC. TANK
 VENDOR
 MATL PPL
 SIZE 6'0" X 7'-5"
 HP N/A
 RPM N/A
 CAPACITY 1000 GAL
 TEMP AMB.
 PRES. ATM

ED. NO. P-5401
 TYPE PUMP
 NAME AMINE SCRUBBER CIRC. PUMP
 VENDOR
 MATL 316 SS
 SIZE 2 1/2"-10/100
 HP 5
 RPM 1750
 CAPACITY 75 GPM
 TEMP AMB.
 PRES. 100" TDH

ED. NO. B-5401
 TYPE FAN
 NAME AMINE SCRUBBER
 VENDOR
 MATL FRP
 SIZE
 HP N/A
 RPM N/A
 CAPACITY 2500 CFM
 TEMP AMB.
 PRES. 1/2" WC

ED. NO. C-5401
 TYPE COLUMN
 NAME AMINE SCRUBBER
 VENDOR
 MATL 316 SS
 SIZE 3'-0" D X 18'-0"
 HP N/A
 RPM N/A
 CAPACITY 2500 CFM
 TEMP AMB.
 PRES. ATM

ED. NO. C-5402
 TYPE COLUMN
 NAME AMINE SCRUBBER COLUMN
 VENDOR
 MATL
 SIZE
 HP
 RPM
 CAPACITY
 TEMP
 PRES.



REV	DESCRIPTION	DATE	BY	CHKD	APP'D
1	ISSUED FOR CONSTRUCTION	11/20/70	AM	AM	
2	GENERAL REVISION	10/20/70	AM	AM	
3	GENERAL REVISION	1/4/70	SS	SS	
4	FOR CHANGING	1/4/70	SS	SS	

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SCALE NONE
 5-503-

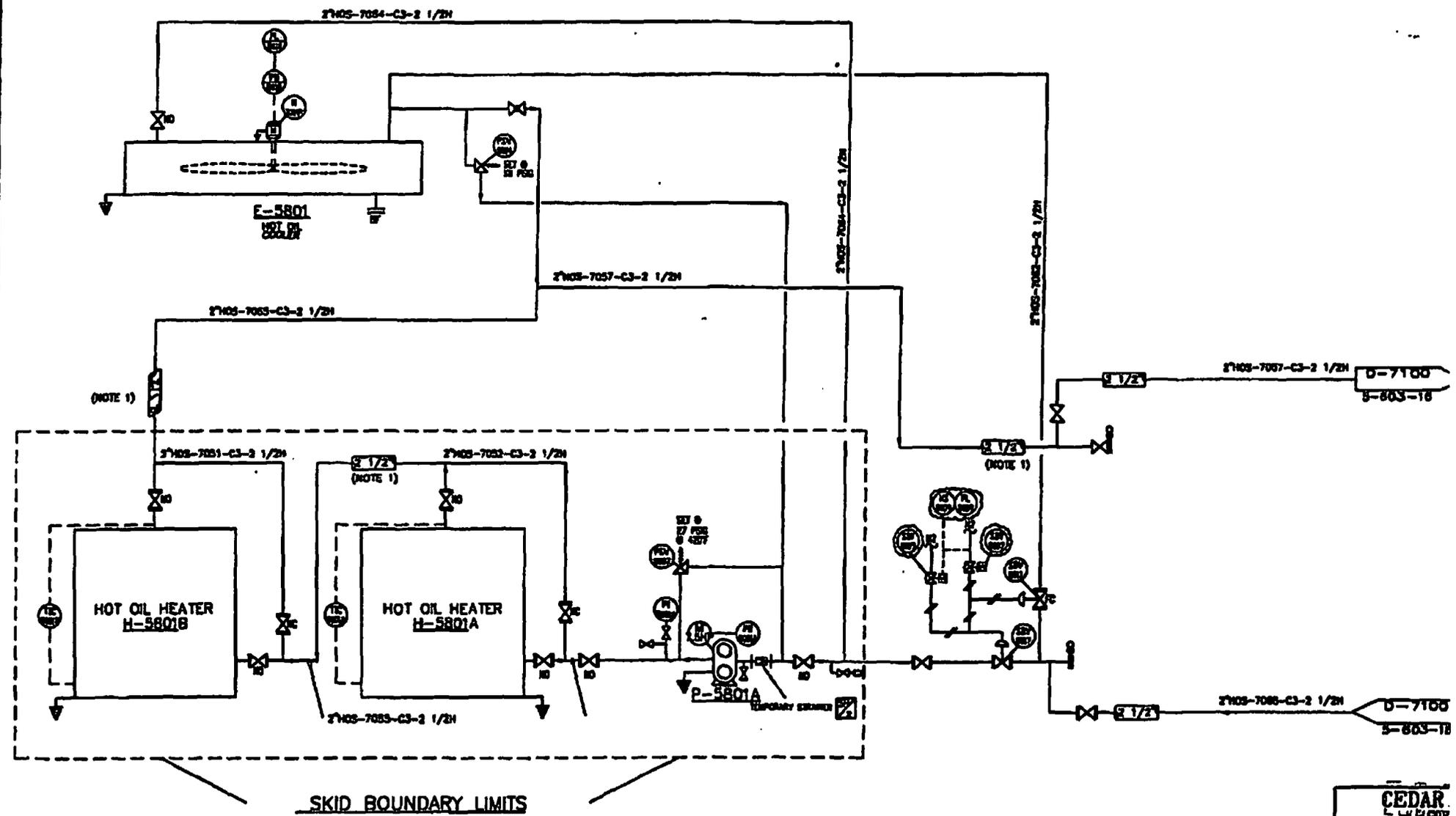
EQ. NO. V-5801
 TYPE TANK
 NAME HOT OIL SURGE TANK
 VENDOR
 MATL 304SS
 SIZE
 HP
 RPM
 CAPACITY 250 GAL.
 TEMP 425F
 PRES. 40PSIG

EQ. NO. P-5801A
 TYPE PUMP
 NAME HOT OIL
 VENDOR DUCTILE
 MATL
 SIZE
 HP 7.5
 RPM 3500
 CAPACITY 80GPM
 TEMP 425F
 PRES.

EQ. NO. H-5801A
 TYPE EXCHANGER
 NAME HOT OIL HEATER
 VENDOR CHROMALOX
 MATL SS
 SIZE N/A
 HP N/A
 RPM N/A
 CAPACITY 270,000 BTU/HR
 TEMP 4A
 PRES. 20 PSIG

EQ. NO. H-5801B
 TYPE EXCHANGER
 NAME HOT OIL HEATER
 VENDOR CHROMALOX
 MATL SS
 SIZE N/A
 HP N/A
 RPM N/A
 CAPACITY 270,000 BTU/HR
 TEMP 4A
 PRES. 20 PSIG

EQ. NO. E-5801
 TYPE EXCHANGER
 NAME HOT OIL COOLER
 VENDOR HUSSON
 MATL 225 FT BARE
 SIZE
 HP
 RPM
 CAPACITY 1,700 BTU/HR
 TEMP 425 F
 PRES. 20 PSIG

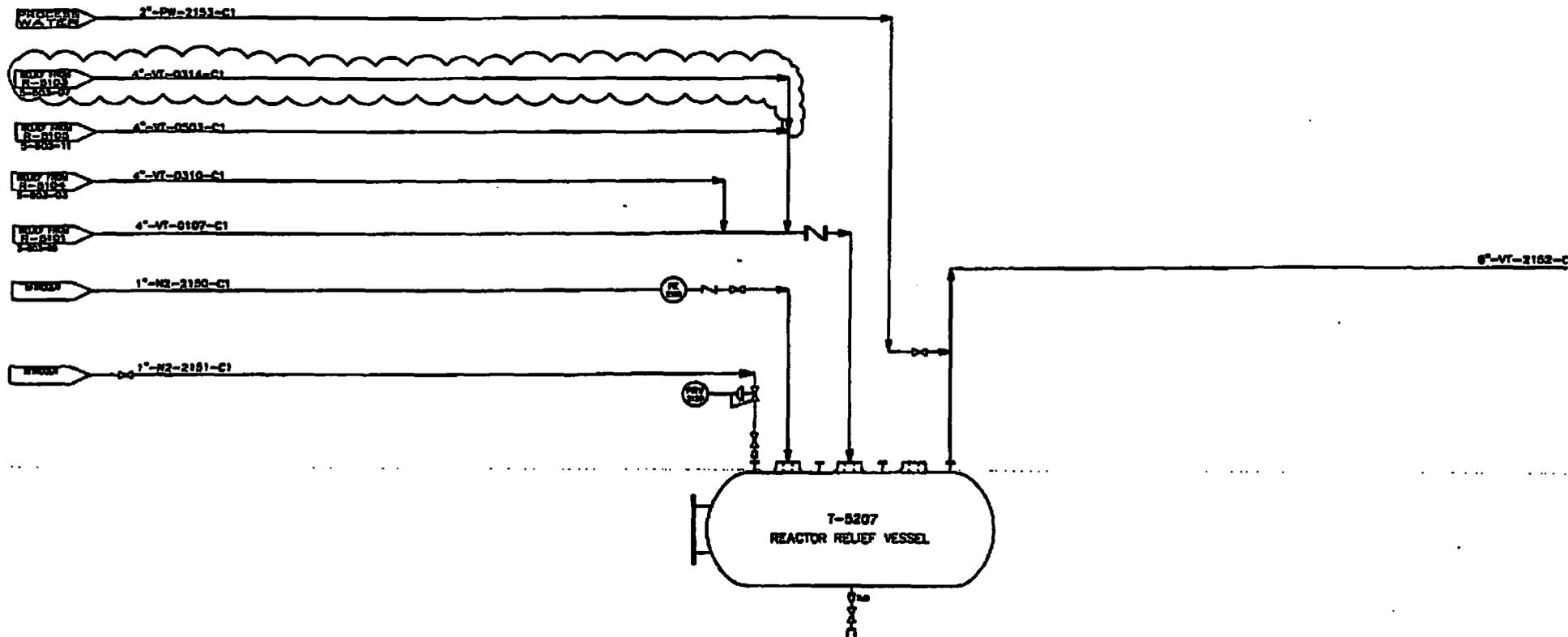


- NOTES
- 1) ALL HOT OIL REGULATORS TO BE PREHEATED COIL.
 - 2) VIEW TO SAFE LOCATION - INCLUDE "BIG SCREEN".
 - 3) 3000 AMP SYSTEM

NO.	REVISIONS	DATE	BY	CHKD BY	APP'D
1	AS BUILT	11/28/00	ALM		
2	GENERAL REVISION	8/2/00	1000		
3	CHANGES REVISION	8/2/00	1000		
4	FOR DISCREPANCY	1/6/00	1000		

CEDAR
 L. L. & CO. INC.
 WEST 02
 UNIT
 AVENTIS / INSTRUM
 HOT OIL SU
 NONE 5-803

EQ. NO. T-2207
 TYPE VESSEL
 NAME REACTOR RELIEF VESSEL
 VENDOR Taylor - Forge
 MATL 316 SS
 SIZE 57" x 15'
 HP N/A
 RPM N/A
 CAPACITY 2200 GAL
 TEMP 40 C
 PRES. 1100 PSIG



MAS

CEDAF

WEST

LI

AVENUE
 PIPING & INSTR
 VENT CONDENS

NONE
 3-503

NO.	DESCRIPTION	DATE	BY	CHKD	APPROV	REVISION
1	AS BUILT	11/20/00	ALM	MSR		
2	GENERAL REVISIONS	5/15/00	TDC	MSR		
3	FOR DISCONNECT	4/18/00	TDC	MSR	MSR	



Aventis CropScience

December 7, 2000

Ms. Lisa Walker
c/o Cedar Chemical
49 Phillips Road 311
Helena, AR 72342

Dear Lisa:

Enclosed is a Routing guide for Aventis CropScience shipments that will be shipped from Cedar Chemical. Please forward this to the appropriate individual if you are not responsible for shipments from Cedar Chemical.

The Guide has four sections:

- 1) Carrier List
- 2) LTL Routing Guide
- 3) Truckload Routing Guide
- 4) Small Package Carrier Section

The Carrier List shows all carriers approved for use from Gray Distribution. The other sections must be consulted to determine when each carrier may be used.

The LTL Routing Guide shows two or three carriers for each state. Carriers are shown in order of preference and must be called in order shown. Use the 2nd or 3rd option carriers only when absolutely necessary. Generally an LTL shipment is one weighing 16,000 pounds or less. Sometimes more than 16,000 pounds can be shipped LTL. Please call if you need to discuss shipments in the 16,000 – 18,000 pound range.

The Truckload Routing Guide shows the carriers listed in order of lowest to highest cost for each destination state. The carriers should be called in order as listed to minimize the cost to Aventis CropScience.

The Small Package Carrier Section shows the carriers approved for small package shipments.

Please call me at (919) 549-2298 if you have questions.

Sincerely,

A handwritten signature in cursive that reads 'Mary M. Scotton'.
Mary M. Scotton

Cedar Chemical
CARRIER LISTING

CARRIER	CARRIER CODE	CARRIER TYPE SERVICE AREA	CONTACT	TELEPHONE
A. I. TRANSPORTATION	AITP	TL\TL NICHE REGIONAL	DAVID MOORE	901-346-7455
AMERICAN FREIGHTWAYS	ARFW	LTL CORE REGIONAL	LOCAL TERMINAL	
ANDERSON TRUCKING SERVICE	ANMN	TL CORE NATIONWIDE		800-654-3322
AVERITT EXPRESS	AVRT	LTL CORE REGIONAL	LOCAL TERMINAL	
BURLINGTON MOTOR CARRIERS	BMTR	TL CORE NATIONWIDE	DENISE STIGLER	800-933-7483
CON-WAY CENTRAL EXPRESS	CWCE	LTL CORE REGIONAL	LOCAL TERMINAL	
CONWAY SOUTHERN EXPRESS	CWSE	LTL CORE REGIONAL	LOCAL TERMINAL	
EMPIRE EXPRESS	EPXP	TL CORE NATIONWIDE	TONYA GLASS	800-851-0151 X102
EMPIRE EXPRESS	EPXP	TL CORE NATIONWIDE	KEN TANKERSLEY	800-851-0152
FEDERAL EXPRESS	FDE	SMALL PKG NATIONWIDE	LOCAL TERMINAL	
OVERNITE TRANSPORTATION CO	OVNT	LTL CORE NATIONWIDE	LOCAL TERMINAL	
RANGER TRANSPORTATION	LRGR	TL NICHE NATIONWIDE	CHERYL ROBINSON	800-872-9441
ROADWAY EXPRESS	RDWY	LTL CORE NATIONWIDE	LOCAL TERMINAL	
SAIA	SAIA	LTL CORE REGIONAL	LOCAL TERMINAL	
SOUTHEASTERN FREIGHTLINES	SEFL	LTL CORE REGIONAL	LOCAL TERMINAL	
SOUTHERN AG CARRIERS	SAGQ	TL NICHE REGIONAL	CINDY COFFEY	800-700-6521
SWIFT TRANSPORTATION	SWFT	TL CORE NATIONWIDE	TRUDY MOSS	800-800-7800
TRANS-CARRIERS	TCAR	TL NICHE NATIONWIDE	JENNY	800-627-1824
UNITED PARCEL SERVICE	UPSN	SMALL PKG NATIONWIDE	LOCAL TERMINAL	
YELLOW FREIGHT SYSTEM	YFSY	LTL CORE NATIONWIDE	LOCAL TERMINAL	

**Cedar Chemical
LTL Routing Guide**

State	Carrier 1	Carrier 2	Carrier 3
Alabama	American	Saia	
Arizona	Roadway	Yellow	Overnite
Arkansas	American	Saia	
California	Roadway	Yellow	Overnite
Colorado	American	Yellow	Roadway
Connecticut	Estes	Yellow	Roadway
Delaware	American	Yellow	Overnite
Florida	American	Yellow	
Georgia	American	Saia	
Idaho	Yellow	Roadway	
Illinois	American	Yellow	Roadway
Indiana	American	Yellow	Roadway
Iowa	American	Yellow	Roadway
Kansas	American	Yellow	Roadway
Kentucky	American	Yellow	Roadway
Louisiana	American	Saia	Merchants
Maine	Estes	Yellow	Roadway
Maryland	American	Yellow	
Massachusetts	Estes	Yellow	Roadway
Michigan	Yellow	Roadway	Overnite
Minnesota	American	Yellow	
Mississippi	American	Saia	
Missouri	American	Yellow	Roadway
Montana	Yellow	Roadway	

**Cedar Chemical
LTL Routing Guide**

Nebraska	American	Yellow	Roadway
Nevada	Yellow	Roadway	
New Hampshire	Yellow	Roadway	
New Jersey	Estes	Yellow	Roadway
New Mexico	American	Yellow	Overnite
New York	Estes	Yellow	Roadway
North Carolina	American	Yellow	
North Dakota	Yellow	Roadway	
Ohio	American	Yellow	Roadway
Oklahoma	American	Yellow	Roadway
Oregon	Yellow	Roadway	
Pennsylvania	Estes	Yellow	Roadway
Rhode Island	Estes	Yellow	Roadway
South Carolina	American	Yellow	
South Dakota	Yellow	Roadway	
Tennessee	American	Saia	
Texas	American	Yellow	Roadway
Utah	Roadway	Yellow	
Vermont	Estes	Yellow	Roadway
Virginia	American	Roadway	Overnite
Washington	Yellow	Roadway	
West Virginia	American	Yellow	Roadway
Wisconsin	American	Yellow	Roadway
Wyoming	Yellow	Roadway	

**Cedar Chemical
Truckload Routing Guide**

State	Rank	Carriers
Alabama	1	Trans-Carriers
Alabama	2	Swift Transportation
Alabama	3	Ranger Transportation
Alabama	4	Empire Express Continuous
Alabama	5	Southern Ag Carriers
Alabama	6	Burlington Motor Carriers
Alabama	7	Empire Express
Alabama	8	Anderson Trucking Service
Arizona	1	Swift Transportation
Arizona	2	Empire Express Continuous
Arizona	3	Ranger Transportation
Arizona	4	Empire Express
Arizona	5	Trans-Carriers
Arizona	6	Anderson Trucking Service
Arkansas	1	A I Transportation <130 miles
Arkansas	1	Southern Ag Carriers >130 miles
Arkansas	2	Empire Express >130 miles
California	1	Trans-Carriers
California	2	Swift Transportation
California	3	Empire Express Continuous
California	4	Anderson Trucking Service
California	5	Empire Express
California	6	Ranger Transportation
Colorado	1	Ranger Transportation
Colorado	2	Empire Express Continuous
Colorado	3	Swift Transportation
Colorado	4	Empire Express
Colorado	5	Trans-Carriers
Colorado	6	Anderson Trucking Service
North Florida	1	Ranger Transportation
North Florida	2	Empire Express Continuous
North Florida	3	Burlington Motor Carriers
North Florida	4	Empire Express
North Florida	5	Southern Ag Carriers

**Cedar Chemical
Truckload Routing Guide**

North Florida	6	Trans-Carriers
North Florida	7	Anderson Trucking Service
North Florida	8	Swift Transportation
Georgia	1	Trans-Carriers
Georgia	2	Ranger Transportation
Georgia	3	Swift Transportation
Georgia	4	Anderson Trucking Service
Georgia	5	Empire Express Continuous
Georgia	6	Empire Express
Georgia	7	Southern Ag Carriers
Georgia	8	Burlington Motor Carriers
Idaho	1	Swift Transportation
Idaho	2	Ranger Transportation
Idaho	3	Empire Express Continuous
Idaho	4	Empire Express
Idaho	5	Trans-Carriers
Idaho	6	Anderson Trucking Service
Illinois	1	Anderson Trucking Service
Illinois	2	Swift Transportation
Illinois	3	Trans-Carriers
Illinois	4	Empire Express Continuous
Illinois	5	Ranger Transportation
Illinois	6	Empire Express
Illinois	7	Burlington Motor Carriers
Indiana	1	Burlington Motor Carriers
Indiana	2	Trans-Carriers
Indiana	3	Swift Transportation
Indiana	4	Empire Express Continuous
Indiana	5	Anderson Trucking Service
Indiana	6	Ranger Transportation
Indiana	7	Empire Express
Iowa	1	Anderson Trucking Service

**Cedar Chemical
Truckload Routing Guide**

Iowa	2	Empire Express Continuous
Iowa	3	Burlington Motor Carriers
Iowa	4	Swift Transportation
Iowa	5	Ranger Transportation
Iowa	6	Empire Express
Iowa	7	Trans-Carriers
Kansas	1	Empire Express Continuous
Kansas	2	Trans-Carriers
Kansas	3	Swift Transportation
Kansas	4	Empire Express
Kansas	5	Anderson Trucking Service
Kansas	6	Burlington Motor Carriers
Kansas	7	Ranger Transportation
Louisiana	1	A I Transportation <130 miles
Louisiana	1	Southern Ag Carriers >130 miles
Louisiana	2	Empire Express >130 miles
Maryland	1	Ranger Transportation
Maryland	2	Anderson Trucking Service
Maryland	3	Empire Express Continuous
Maryland	4	Trans-Carriers
Maryland	5	Swift Transportation
Maryland	6	Empire Express
Maryland	7	Burlington Motor Carriers
Minnesota	1	Anderson Trucking Service
Minnesota	2	Swift Transportation
Minnesota	3	Burlington Motor Carriers
Minnesota	4	Empire Express Continuous
Minnesota	5	Ranger Transportation
Minnesota	6	Empire Express
Minnesota	7	Trans-Carriers
Mississippi	1	A I Transportation <130 miles
Mississippi	1	Southern Ag Carriers >130 miles
Mississippi	2	Empire Express >130 miles

**Cedar Chemical
Truckload Routing Guide**

Missouri	1	A I Transportation <130 miles
Missouri	1	Southern Ag Carriers >130 miles
Missouri	2	Empire Express >130 miles
Nebraska	1	Empire Express Continuous
Nebraska	2	Empire Express
Nebraska	3	Swift Transportation
Nebraska	4	Trans-Carriers
Nebraska	5	Burlington Motor Carriers
Nebraska	6	Ranger Transportation
Nebraska	7	Anderson Trucking Service
New Jersey	1	Ranger Transportation
New Jersey	2	Anderson Trucking Service
New Jersey	3	Empire Express Continuous
New Jersey	4	Trans-Carriers
New Jersey	5	Swift Transportation
New Jersey	6	Empire Express
New Jersey	7	Burlington Motor Carriers
North Carolina	1	Swift Transportation
North Carolina	2	Anderson Trucking Service
North Carolina	3	Trans-Carriers
North Carolina	4	Ranger Transportation
North Carolina	5	Southern Ag Carriers
North Carolina	6	Empire Express Continuous
North Carolina	7	Burlington Motor Carriers
North Carolina	8	Empire Express
North Dakota	1	Trans-Carriers
North Dakota	2	Ranger Transportation
North Dakota	3	Empire Express Continuous
North Dakota	4	Empire Express
North Dakota	5	Anderson Trucking Service
North Dakota	6	Burlington Motor Carriers

**Cedar Chemical
Truckload Routing Guide**

North Dakota	7	Swift Transportation
Ohio	1	Anderson Trucking Service
Ohio	2	Trans-Carriers
Ohio	3	Empire Express Continuous
Ohio	4	Swift Transportation
Ohio	5	Ranger Transportation
Ohio	6	Empire Express
Ohio	7	Burlington Motor Carriers
Pennsylvania	1	Ranger Transportation
Pennsylvania	2	Anderson Trucking Service
Pennsylvania	3	Empire Express Continuous
Pennsylvania	4	Trans-Carriers
Pennsylvania	5	Swift Transportation
Pennsylvania	6	Empire Express
Pennsylvania	7	Burlington Motor Carriers
Tennessee	1	A I Transportation <130 miles
Tennessee	1	Southern Ag Carriers >130 miles
Tennessee	2	Empire Express >130 miles
Texas E of I35 & N of I37	1	Southern Ag Carriers
Texas E of I35 & N of I37	2	Empire Express Continuous
Texas E of I35 & N of I37	3	Ranger Transportation
Texas E of I35 & N of I37	4	Trans-Carriers
Texas E of I35 & N of I37	5	Empire Express
Texas E of I35 & N of I37	6	Swift Transportation
Texas E of I35 & N of I37	7	Anderson Trucking Service
Texas E of I35 & N of I37	8	Burlington Motor Carriers
Texas W of I35 & S of I37	1	Southern Ag Carriers
Texas W of I35 & S of I37	2	Ranger Transportation
Texas W of I35 & S of I37	3	Empire Express Continuous
Texas W of I35 & S of I37	4	Empire Express
Texas W of I35 & S of I37	5	Trans-Carriers
Texas W of I35 & S of I37	6	Swift Transportation
Texas W of I35 & S of I37	7	Burlington Motor Carriers

**Cedar Chemical
Truckload Routing Guide**

Texas W of I35 & S of I37	8	Anderson Trucking Service
Virginia	1	Southern Ag Carriers
Virginia	2	Ranger Transportation
Virginia	3	Empire Express Continuous
Virginia	4	Swift Transportation
Virginia	5	Anderson Trucking Service
Virginia	6	Empire Express
Virginia	7	Trans-Carriers
Virginia	8	Burlington Motor Carriers
Washington	1	Trans-Carriers
Washington	2	Swift Transportation
Washington	3	Empire Express Continuous
Washington	4	Anderson Trucking Service
Washington	5	Empire Express
Washington	6	Ranger Transportation
West Virginia	1	Empire Express Continuous
West Virginia	2	Ranger Transportation
West Virginia	3	Swift Transportation
West Virginia	4	Empire Express
West Virginia	5	Burlington Motor Carriers
West Virginia	6	Trans-Carriers
West Virginia	7	Anderson Trucking Service

**Cedar Chemical
Small Package**

United Parcel Service Surface small package

Federal Express Air small package

PACKING SLIP

JOB NUMBER: 208970 DATE: 12-11-00

CUSTOMER: SHIP TO:

AVENTIS CROPSCIENCE CEDAR CHEMICAL CORP.64
ATTN: 49 PHILLIPS ROAD #311

DURHAM NC HELENA AR.
27709 72342

P.O. NUMBER: 673702

THIS SHIPMENT CONTAINS

5375 CYCLANILIDE LABEL FOR CEDAR
ACS 123994A/3100 12/00

1 SKID @ 9 CTNS @ 640.1 @ 616 5375

TOTAL = 5375

WRITTEN BY: JL
PACKED BY: XX
SHIPPED BY: AMERICAN FREIGHTWAYS
RECEIVED BY: _____

CONSIGNEE DELIVERY RECEIPT

Freight Bill # 0884358162 50 TNBR#:		CONSIGNEE CEDAR CHEMICAL 49 PHILLIPS RD 311 HWY 242 HELENA AR 72342		Trailer # FW862		SHIPPER GREEN PRINTING CO INC 101 LEXINGTON PKY LEXINGTON NC 27295		
Date: 12-12-00								
H/U	PCS	HM	DESCRIPTION	WGT-LBS	NMFC	PCF CLASS	RATE	CHARGES
	10		PO1# NS PRINTED MATTER 10 CTNS ON 1 SKID 000175 FUEL SURCHG LTL SHPT3.50% ** FAK RATES APPLIED **	308	161870-00		070	
1	10		FREIGHT CHARGES PREPAID	308				
* ANY ADDITIONAL SERVICES MAY RESULT IN ADDITIONAL CHARGES * * CHARGES SUBJECT TO CHANGE *				B/L # NS				
Received by:				P.O. # NS				
Date: 12-15-00		Arrive:		Depart:				
Delv. Driver: <i>Wood</i>		Driver #: <i>19830</i>						
<input type="checkbox"/> DELV WITH S/W INTACT		<input checked="" type="checkbox"/> # of Skids Delv						
<input type="checkbox"/> CLEAR		<input type="checkbox"/> SHORT		<input type="checkbox"/> OVER		<input type="checkbox"/> DAMAGE		
EXCEPTIONS: <i>10%</i>								



P.O. Box 840, Harrison, AR 72602-0840 (ARFW)
Phone: 800-447-8139 Page 1 of 1

Customer	Product	Customer Contact	Phone Number	Potential			Y=Yes N=No P=Partial			Comments/Action Items	Status	
				Ann. Volume Mlbs	Toll Price \$/lb	Ann. Sales M\$	Confidentiality Agreement	Tech Package	Written Proposal Made		Target Date	Responsible Party
Aventis	Cyclanilide	Serge Rovef	33-472-852920	230	3.64	1,201	Y	Y	Y	Start-up 11/00	Underway	J. Krusting
Mace	CS-1	Chris Kulp	215-628-2946	90	5.00	450	Y	Y	Y	Start-up 10/00	Underway	J. Siebert
Witco	H2	Bill Gilroy	304-652-8000	200-500	6.00	1200-3000	Y	Y	Y	Under development by Witco	3Q 2001	J. Krusting
PPG	Drying	Chris Kulp	215-628-2946	100	0.50	50	Y	Y	Y	Killed-too small	-	J. Mancini
Dead Sea	Oxy	Mattie Kestler	972-629-7645	1,000	2.00	2,000	Y	P	N	Under development by Dead Sea	3Q 2001	J. Mancini
Rhodia	Guerbet Alc.	Dave Armstrong	609-860-4189	300	3.00	900	Y	P	N	Dead	-	-
Ticona	PPS	Jack Yortle	908-622-7231	500	0.80	400	Y	Y	Y	Ticona must supply 2MM capex	-	J. Siebert
Tetra	Flame retardant	Art Patterson	281-364-4368	6,000	0.25	1,500	Y	Y	Y	Suing for capex	-	J. Pyrlgi
Orion	Neutralization	Rick Billings	281-773-8062	15,000	0.10	1,800	Y	Y	N	Dead	-	J. Siebert
ARC	Thiocarbamate	Bob Vitoux	281-932-0604	500	0.40	200	Y	N	N	Dead - price too low	-	-
PPG	DNCB	Dave Roberts	412-434-2276	2,640	0.27	712	N	N	N	Dead - price too low	-	-
Cyclca	Polymer	Gary Fahler	518-339-2147	-	per diam \$10,000	-	Y	Y	Y	Dead - Capex too high	-	-
GE	Nitration	Mimi Aquino	847-520-9600	500	per diam \$8,000	-	Y	Y	Y	Under Review	2Q 2001	J. Krusting
RiceCo	SuperWham	Stanley Bernard	901-684-6380	-	-	1,000 Savings	-	N	-	Under Review	2Q 2001	D. Malcolm
Internal	Metolachlor	Stanley Bernard	901-684-6380	-	-	-	-	Y	-	Waiting for Approval	3Q 2001	J. Krusting
Internal	Dichlorid	Stanley Bernard	901-684-6380	-	-	-	-	Y	-	Under Review	3Q 2001	J. Pyrlgi
Internal	1-Nitropropane	Geoffrey Pratt	901-684-6373	-	-	-	-	P	-	Under Review	3Q 2001	T. Dinculescu
Internal	Pendimethalin	Stanley Bernard	901-684-6380	-	4.00	-	-	Y	N	Under Review	1Q 2001	J. Pyrlgi
Internal	Baythroid	Stanley Bernard	901-684-6380	-	37.00	-	N	N	N	Under Review	1Q 2001	J. Krusting
Internal	Merphos	Stanley Bernard	901-684-6380	-	-	-	N	N	N	Under Review	1Q 2001	T. Dinculescu

Chemical	Supplier Name	City	State	Spec #
2,4 DCA, CYC	VARIOUS			910200
Test	Method	Type	Low	High
2,4 DCA% COA			99.0000	100.0000
				Description

Chemical	Supplier Name	City	State	Spec #
ACETIC ACID				910194
Chemical	Supplier Name	City	State	Spec #
ACETIC ACID	A AND W AMERICAS	CHARLESTON	SC	910058
Test	Method	Type	Low	High
ACETIC % COA			96.5000	100.0000
				ACETIC % 96.5 min

Chemical	Supplier Name	City	State	Spec #
ACETIC ANHYD	EASTMAN CHEMICAL CO.	KINGSPORT	TN	910090
Test	Method	Type	Low	High
ANHYD % COA			99.5000	100.0000
				99.5% min

Chemical	Supplier Name	City	State	Spec #
ACETIC ANHYD	HOECHST-CELANESE	PAMPA, TX	TX	910034
Test	Method	Type	Low	High
ANHYD % COA			99.5000	100.0000
				ANHYDRIDE %99.5 min

Chemical	Supplier Name	City	State	Spec #
ACETIC TRUCK	CONE SOLVENTS	MEMPHIS	TN	910108
Test	Method	Type	Low	High
%PURITY coa			99.8500	100.0000
ACETIC % COA			95.0000	99.9000
				95-99.9%active

Chemical	Supplier Name	City	State	Spec #
ACETIC\FMC	CONE SOLVENTS	MEMPHIS	TN	910136
Test	Method	Type	Low	High
% ACTIVE COA			95.0000	99.9000
%PURITY coa			99.8500	100.0000
				% acetic acid active
				purity for glacial acetic acid

Chemical	Supplier Name	City	State	Spec #
ACETONE	JLM INDUSTRIES	MT VERNON, INDIANA	IN	910057
Test	Method	Type	Low	High
WATER % COA			0.0100	0.3000
				0.3% water max

Chemical	Supplier Name	City	State	Spec #
ACETONE	IDEAL	MEMPHIS	TN	910058
Test	Method	Type	Low	High
WATER % COA		N	0.0100	0.3000
				WATER IN ACETONE 0.3% max

APPROVED
 FEB 23 2001
 BY: *[Signature]*

Chemical	Supplier Name		City		State	Spec #
AGENT 1568-6	STEPAN		WINDER		GA	910064
Test	Method	Type	Low	High	Description	
PERFORMN	PROP-7		1.0000	3.0000	1 = fail, 2 = pass	
WATER ‡	GAM-2		0.0100	2.0000	.	

Chemical	Supplier Name		City		State	Spec #
AGNT X205615	STEPAN		WINDER		GA	910103
Test	Method	Type	Low	High	Description	
PERMFORN	PROP-7		1.0000	3.0000	PROPANIL EMULSION PERFORMANCE 1 = fail, 2 = pass	
WATER ‡	GAM-2		0.0100	2.0000	.	

02/23/01 07:25

Raw Materials Acceptance Specs

Page # 2

Chemical	Supplier Name	City	State	Spec #	
ALUM SULFATE	CONE SOLVENTS	MEMPHIS	TN	910133	
Test	Method	Type	Low	High	Description
WT % ALM COA			48.0000	52.0000	.

Chemical	Supplier Name	City	State	Spec #	
ANHYD. HCL	VARIOUS			910094	
Test	Method	Type	Low	High	Description
%HCL-ANH from COA			99.0000	100.0000	% anhydrous HCL 99% min

Chemical	Supplier Name	City	State	Spec #	
AU-522	ADJU. UNLLIM .3LB EMULS.	TULSA	OK	910043	
Test	Method	Type	Low	High	Description
PERFORMN	PROP-7		1.0000	3.0000	1 = fail, 2 = pass.
WATER %	GAM-2		0.0100	2.0000	.

Chemical	Supplier Name	City	State	Spec #	
B AROMATICS	BASIS PETROLEUM	HOUSTON	TX	910021	
Test	Method	Type	Low	High	Description
B AROMAT COA			1.0000	3.0000	1 = not B grade, 2 = is B grade

Chemical	Supplier Name	City	State	Spec #	
B AROMATICS	PHIBRO	HOUSTON	TX	910055	
Test	Method	Type	Low	High	Description
B AROMAT COA			1.0000	3.0000	1 = not B grade, 2 = is B grade

Chemical	Supplier Name	City	State	Spec #	
B-ODCB				910004	
Test	Method	Type	Low	High	Description
%ODCB	na		98.0000	100.0000	Bayer ODCB 98.5%min odcb, 1% max pdcb
%PDCB	na		0.0010	2.0000	para

Chemical	Supplier Name	City	State	Spec #	
BHT	VARIOUS			910126	
Test	Method	Type	Low	High	Description
ASH	COA		0.0001	0.0020	ASH = 0.002 MAX, 2,6DI-TERT-BUTYL-PARA-CRESOL = BHT
COLOR	COA		0.0010	5.0000	APHA COLOR OF 10% SOLUTION = SMAX
FREEZ PT	COA		0.0010	69.3000	69.2 C MINIMUM FREEZE POINT
MOISTURE	COA		0.0001	0.0500	0.05% MAX MOISTURE
PURITY	COA		99.0000	100.0000	2,6-DITERT-BUTYL PARA-CRESOL = BHT

Chemical	Supplier Name	City	State	Spec #
BROMINE	VARIOUS			910183

AB0000025772

Test	Method	Type	Low	High	Description
BROMIN	% COA		99.9000	100.0000	.

Chemical	Supplier Name	City	State	Spec #
BUTYL ALCOHL	SHELL CHEMICAL CO	DEER PARK	TX	910060

Test	Method	Type	Low	High	Description
BUTYL	% COA		99.0000	100.0000	99%min.

Chemical	Supplier Name	City	State	Spec #
CALC CHLORID	TETRA CHEMICALS	WEST MEMPHIS	AR	910062

Test	Method	Type	Low	High	Description
NO SPEC.	no specs		1.0000	3.0000	no specification required - 1=we reject, 2 = we accept.

Chemical	Supplier Name	City	State	Spec #	
CALCCHLR-FMC	VARIOUS			910154	
Test	Method	Type	Low	High	Description
CACL2 %	coa		34.0000	38.0000	.
Chemical	Supplier Name	City	State	Spec #	
CATALYST-DCA	JOHNSON MATTHEY	WEST DEPTFORD	NJ	910167	
Test	Method	Type	Low	High	Description
ACTIVITY R&D			6.0000	12.0000	.
Chemical	Supplier Name	City	State	Spec #	
CATLYST-CYMP	VARIOUS			910151	
Test	Method	Type	Low	High	Description
PALLADIM COA		G	5.0000	0.0000	.
Chemical	Supplier Name	City	State	Spec #	
CAUSTIC\FMC	CHEMTECH.	MEMPHIS	TN	910134	
Test	Method	Type	Low	High	Description
% NAOH COA			49.0000	51.0000	.
Chemical	Supplier Name	City	State	Spec #	
CHLORINE\FMC	IDEAL	MEMPHIS	TN	910135	
Test	Method	Type	Low	High	Description
CHLORINE COA			99.5000	100.0000	%chlorine
Chemical	Supplier Name	City	State	Spec #	
CPDM-CYCLAN	CREANOVA			910199	
Test	Method	Type	Low	High	Description
DIMM %	COA	L	1.0000	1.0000	.
DMF %	COA	L	0.7500	0.7500	.
PURITY %	COA	G	97.5000	0.0000	.
Chemical	Supplier Name	City	State	Spec #	
CYCLOHEXANE				910187	
Chemical	Supplier Name	City	State	Spec #	
CYCLOHEXANE	CONE SOLVENTS	MEMPHIS	TN	910174	
Test	Method	Type	Low	High	Description
% H2O	COA		0.0100	0.1000	.
Chemical	Supplier Name	City	State	Spec #	
DCA	BAYER PRODUCTS	Pittsburgh	PA	910127	
Test	Method	Type	Low	High	Description
% DCA	COA		98.0000	100.0000	% DCA

H2O PPM COA 0.0001 500.0000 Water in DCA

Chemical	Supplier Name	City	State	Spec #	
DCA	TOLOCHIMIE	TOULOUSE		910146	
Test	Method	Type	Low	High	Description
DCA %	COA		98.0000	100.0000	.
WATERPPM	COA		10.0000	1000.0000	.

Chemical	Supplier Name	City	State	Spec #	
DCA RM-PROCH	PROCHROM INC.	SALVADOR-BAHTI		910104	
Test	Method	Type	Low	High	Description
COA	COA		98.0000	100.0000	98%min., 500 ppm water max

Chemical	Supplier Name		City		State	Spec #
DCP-DOVER	SCHNECTADY CHEMICAL		City			910163
Test	Method	Type	Low	High	Description	
ASSAY %	COA		95.0000	100.0000	.	
H2O PPM	COA		0.0100	200.0000	.	

Chemical	Supplier Name		City		State	Spec #
DCPD	BF GOODRICH		CALVERT CITY		KY	910125
Test	Method	Type	Low	High	Description	
C10, ACET	COA		0.0025	0.0055	C10%	
DCPD %	COA	G	99.0000	100.0000	% DCPD	
OXY'S	COA	L	0.0001	0.0025	0.0025% MAX	
WATER	COA		0.0001	100.0000	100 PPM WATER MAX	

Chemical	Supplier Name		City		State	Spec #
DCPD	KMTEX		PORT ARTHUR		TX	910045
Test	Method	Type	Low	High	Description	
C10 ACET	COA		0.0025	0.0055	C10 %	
DCPD %	COA	G	99.0000	100.0000	99%min	
OXYS	COA	L	0.0001	0.0025	0.0025%MAX	
WATER	COA		0.0001	100.0000	100 PPM MAX WATER	

Chemical	Supplier Name		City		State	Spec #
DCPD	VARIOUS					910165
Test	Method	Type	Low	High	Description	
C10	COA		0.0025	0.0055	C10 ACETYLENES	
DCPD	COA		99.0000	100.0000	%DCPD 99.0%MIN	
OXY	COA		0.0001	0.0025	OXY 0.0025% MAX	
WATER	COA		0.0001	100.0000	WATER 100 PPM MAX	

Chemical	Supplier Name		City		State	Spec #
DCPI	TOLOCHIMIE		TOULOUSE			910031
Test	Method	Type	Low	High	Description	
DCPI %	COA		98.0000	100.0000	98%min	

Chemical	Supplier Name		City		State	Spec #
DEAC	VARIOUS					910123
Test	Method	Type	Low	High	Description	
ALUMINUM	COA		21.9000	22.4000	DIETHYLALUMINUM CHLORIDE = DEAC	
APPEAR	COA		0.0001	100.0000	TYPICAL, TYPICAL = 100	
CHLORIDE	COA		29.2000	29.7000	CHLORIDE	
CL/AL	COA		1.0000	1.0300	MOLAR RATIO	
ETHANE	COA		98.0000	100.0000	ETHANE MOLAR%	

HYDROGEN COA	0.0001	0.2000	HYDROGEN MOLEAR% 0.2 MAX
IBUTANE COA	0.0001	0.2000	IBUTANE MOLAR % 0.2MAX
NBUTANE COA	0.0001	2.0000	2 % MAX NBUTANE MOLAR %

Chemical	Supplier Name	City	State	Spec #
DICNIL-CYMP	VARIOUS			910153
Test Method Type	Low	High	Description	
DICNIL % COA	0.0100	100.0000	.	

Chemical	Supplier Name	City	State	Spec #
DIENE RUBBER	FIRESTONE	LAKE CHARLES	LA	910189
Test Method Type	Low	High	Description	
DIENE COA	1.1000	2.0000	BFG PREAPPROVES THIS MATERIAL.	

Chemical	Supplier Name	City	State	Spec #	
MA	AIR PRODUCTS	DECATUR	AL	910068	
Test	Method	Type	Low	High	Description
%DMA	COA		99.0000	100.0000	DMA 99%min
Chemical	Supplier Name	City	State	Spec #	
MA	AIR PRODUCTS.	LEHIGH VALLEY	PA	910069	
Test	Method	Type	Low	High	Description
% DMA	COA		99.0000	100.0000	dma 99% min
Chemical	Supplier Name	City	State	Spec #	
MF	AIR PRODUCTS	DECATUR	AL	910033	
Test	Method	Type	Low	High	Description
DMF %	COA		99.9000	100.0000	99.9% min, 500ppm water max
WATER %	COA		0.0100	0.0500	.
Chemical	Supplier Name	City	State	Spec #	
O-PENTABRM	DOW CHEMICAL	FREEPORT	TX	910179	
Test	Method	Type	Low	High	Description
DPO %	COA		99.0000	100.0000	DPO %
Chemical	Supplier Name	City	State	Spec #	
EDC	OCCIDENTAL CHEMICAL	BAYPORT	TX	910087	
Test	Method	Type	Low	High	Description
EDC %	COA		99.9400	100.0000	99.95% min
Chemical	Supplier Name	City	State	Spec #	
EDC	VARIOUS			910114	
Test	Method	Type	Low	High	Description
%EDC	COA		99.9400	100.0000	EDC raw material for TA production
Chemical	Supplier Name	City	State	Spec #	
EMULS-MOLNTE	WITCO	Houston	tx	910177	
Test	Method	Type	Low	High	Description
PERFORM	DICK FRA		0.0100	2.0000	.
Chemical	Supplier Name	City	State	Spec #	
EPAC	VARIOUS			910120	
Test	Method	Type	Low	High	Description
BFG OK'D	none		1.0000	3.0000	1 = no / 2 = yes bfg approved
Chemical	Supplier Name	City	State	Spec #	
ETHANOX 330	VARIOUS			910102	

Test	Method	Type	Low	High	Description
APPEAR	COA		10.0000	101.0000	APPEARANCE = WHITE TO LIGHT STRAW CRYSTALS, 100 = YES
PURITY	COA		98.0000	100.0000	%PURITY
SETPOINT	COA		154.0000	2000.0000	154 MIN.

Chemical	Supplier Name	City	State	Spec #
ETHYLENE OXD	VARIOUS			910093

Test	Method	Type	Low	High	Description
%E.O.	from COA		99.5000	100.0000	99.5% min Ethylene Oxide, 300 PPM max water
%WATER	from COA		0.0100	0.0300	%moisture in EO

Chemical	Supplier Name	City	State	Spec #
MERRIC CHLRD	VARIOUS			910182

Test	Method	Type	Low	High	Description
FECL %	COA		96.0000	100.0000	.
FERUS CL	COA		0.0100	3.0000	.
IMPURS %	COA		0.0100	1.0000	.

Chemical	Supplier Name	City	State	Spec #
FMC STEP 4	FMC CORP APG	BALTIMORE	MD	910129
Test Method Type Low		High Description		
STEP 4 COA N		0.0000 2.0000		CUSTOMER APPROVED PRODUCT =2, 1= NOT APPROVED

Chemical	Supplier Name	City	State	Spec #
FMC-80-1				910149
Chemical	Supplier Name	City	State	Spec #
FORMALDEHYDE	NESTE RESINS	WINNFIELD	LA	910191
Test Method Type Low		High Description		
FORM % COA		44.5000 45.5000		FORMALDEHYDE
MEOH % COA		4.5000 6.0000		.

Chemical	Supplier Name	City	State	Spec #
FORMALDEHYDE	GEORGIA PACIFIC	TAYLORSVILLE, MS	MS	910066
Test Method Type Low		High Description		
FORM % COA		44.5000 45.5000		44.5 - 45.5% formaldehyde / 4.5-6% Meoh
MEOH % COA		4.5000 6.0000		.

Chemical	Supplier Name	City	State	Spec #
FORMALDEHYDE	SPURLOCK ADHESIVES			910065
Test Method Type Low		High Description		
FORM % COA		44.5000 45.5000		44.5 - 45.5 Formaldehyde, 4.5 - 6% Meoh
MEOH % COA		4.5000 6.0000		.

Chemical	Supplier Name	City	State	Spec #
FORMIC, CYCLA	VARIOUS			910201
Test Method Type Low		High Description		
FORMIC % COA		85.0000 0.0000		.

Chemical	Supplier Name	City	State	Spec #
HCL	VULCAN	BIRMINGHAM	AL	910026
Test Method Type Low		High Description		
HCL % COA		31.5000 34.0000		31.5 - 34% HCL

Chemical	Supplier Name	City	State	Spec #
HCL (ANHYDR.)	VARIOUS			910106
Test Method Type Low		High Description		
HCL/PURE COA		99.0000 100.0000		99% Min. anhydrous for unit 5

Chemical	Supplier Name	City	State	Spec #
HEPTNE DIR	CONE SOLVENTS	MEMPHIS	TN	910083
Test Method Type Low		High Description		

WATER % COA 0.0100 0.1000 0.1% water max

Chemical	Supplier Name	City	State	Spec #	
HEPTNE BFG	CONE SOLVENTS	MEMPHIS	TN	910084	
Test	Method	Type	Low	High	Description
IBP D F. COA			195.0000	205.0000	initial boiling point
WATER % COA			0.0100	0.1000	.

Chemical	Supplier Name	City	State	Spec #	
HYDROGEN	PRAXAIR	MCINTOSH	AL	910086	
Test	Method	Type	Low	High	Description
HYDRO % COA			99.9000	100.0000	99.9% min.

Chemical	Supplier Name	City	State	Spec #
IPA-CYMP	CONE SOLVENTS	MEMPHIS	TN	910150
Test	Method	Type	Low	High
IPA %	COA		99.0000	100.0000
Description IPA FOR CYMP 99.0 MINIMUM				
Chemical	Supplier Name	City	State	Spec #
ISOMIBK STAM	CONE SOLVENTS	MEMPHIS	TN	910070
Test	Method	Type	Low	High
WATER %	COA		0.0100	0.4000
Description 0.4% water max				
Chemical	Supplier Name	City	State	Spec #
ISOMIBK STAM	UNION CARBIDE	CHARLESTON	WV	910071
Test	Method	Type	Low	High
WATER %	COA		0.0100	0.4000
Description 0.4% water max				
Chemical	Supplier Name	City	State	Spec #
ISOPHORONE	CONE SOLVENTS	MEMPHIS	TN	910038
Test	Method	Type	Low	High
WATER %	COA		0.0100	0.5000
Description 0.5% water max				
Chemical	Supplier Name	City	State	Spec #
ISOPHORONE	UNION CARBIDE	CHARLESTON	WV	910067
Test	Method	Type	Low	High
WATER %	COA		0.0100	0.5000
Description 0.5% water max				
Chemical	Supplier Name	City	State	Spec #
ISOPHORONE	ACETO AGRICULTURAL CHEMS.	Lake Success,	ny	910116
Test	Method	Type	Low	High
WATER, %	COA		0.0100	0.5000
Description .				
Chemical	Supplier Name	City	State	Spec #
ISOPHORONE	VARIOUS			910112
Test	Method	Type	Low	High
WATER	coa		0.0010	0.5000
Description 0.5% WATER MAX FROM COA				
Chemical	Supplier Name	City	State	Spec #
LIME	BRAVO LIME COMPANY	SAGINAW,	AL	910050
Test	Method	Type	Low	High
HYDRATED	COA		1.0000	3.0000
Description Hydrated grade/ 1 = no, 2 = yes				
Chemical	Supplier Name	City	State	Spec #
M-680	CONE SOLVENTS	MEMPHIS	TN	910036
Test	Method	Type	Low	High
Description				

WATER % COA 0.0101 0.5000 0.5% water max

Chemical	Supplier Name	City	State	Spec #	
MESITYL OXD.	HOECHST-CELANESE	PAMPA, TX	TX	910047	
Test	Method	Type	Low	High	Description
WATER % COA			0.0100	0.5000	0.5% water max

Chemical	Supplier Name	City	State	Spec #	
METHANOL	CHEMTECH	ST LOUIS,	MO	910113	
Test	Method	Type	Low	High	Description
MEOH % COA			99.0000	100.0000	99.0 % MINIMUM

WATER % GAM-2 0.0001 0.5000 .

Chemical	Supplier Name	City	State	Spec #	
MOLINATE	HUNGARY			910178	
Test	Method	Type	Low	High	Description
MOLINT %	COA	G	96.0000	100.0000	MOLINATE %

Chemical	Supplier Name	City	State	Spec #	
MOLYB CAT.	VARIOUS			910118	
Test	Method	Type	Low	High	Description
BFG OK'D	none		1.5000	3.0000	1 = no / 2 = yes bfg approved

Chemical	Supplier Name	City	State	Spec #	
MORPHOLINE	VARIOUS			910098	
Test	Method	Type	Low	High	Description
%MORPH	COA		99.0000	100.0000	%morpholine 99% min
Chemical	Supplier Name	City	State	Spec #	
N-PROPANOL	VARIOUS			910166	
Test	Method	Type	Low	High	Description
DIST.RNG	COA		96.0000	98.0000	distillation range of 96-98C max is only spec.
Chemical	Supplier Name	City	State	Spec #	
N-PROPYL ALC	CONE SOLVENTS	MEMPHIS	TN	910170	
Test	Method	Type	Low	High	Description
PURITY	dry base		99.9000	100.0000	purity on dry basis (without water)
WATER	by wt.		0.0001	0.1000	water 0.1% max
Chemical	Supplier Name	City	State	Spec #	
NADONE	CONE SOLVENTS	MEMPHIS	TN	910037	
Test	Method	Type	Low	High	Description
WATER	COA		0.0100	0.5000	0.5% max
Chemical	Supplier Name	City	State	Spec #	
NAOH 20	CHEMTECH.	MEMPHIS	TN	910077	
Test	Method	Type	Low	High	Description
NAOH	COA		19.0000	21.0000	19 - 21% Naoh
Chemical	Supplier Name	City	State	Spec #	
NAOH 50	VULCAN	BIRMINGHAM	AL	910074	
Test	Method	Type	Low	High	Description
NAOH	% COA		48.0000	51.0000	48 - 51% Naoh
Chemical	Supplier Name	City	State	Spec #	
NAOH 50	LA ROCHE INDUSTRIES	GRAMERCY	LA	910024	
Test	Method	Type	Low	High	Description
NAOH	% COA		48.0000	51.0000	48 - 51% Naoh
Chemical	Supplier Name	City	State	Spec #	
NAOH 50	IDEAL	MEMPHIS	TN	910072	
Test	Method	Type	Low	High	Description
NAOH	% COA		48.0000	51.0000	48 - 51% Naoh
Chemical	Supplier Name	City	State	Spec #	
NAOH 50	CONE\CO FORMOSA PLASTICS	POINT COMFORT	TX	910073	

Test	Method	Type	Low	High	Description
NAOH	% COA		48.0000	51.0000	48 - 51% Naoh

Chemical	Supplier Name	City	State	Spec #
NAOH 50	CHEMTECH.	MEMPHIS	TN	910107

Test	Method	Type	Low	High	Description
NAOH	% COA		48.0000	51.0000	48 - 51% Naoh

Chemical	Supplier Name	City	State	Spec #
NAOH 50	RAY PIONEER	SOMEWHERE ELSE		910023

Test	Method	Type	Low	High	Description
GRADE			1.0000	3.0000	1 = is not rayon grade....2 = is rayon grade
NAOH	% COA		48.0000	51.0000	48 - 51% Naoh,

Chemical	Supplier Name	City	State	Spec #	
NAOH-CYMP	CONE SOLVENTS	MEMPHIS	TN	910152	
Test	Method	Type	Low	High	Description
NAOH %	COA		0.0100	100.0000	.
Chemical	Supplier Name	City	State	Spec #	
NAOH-DOVER	VARIOUS			910158	
Test	Method	Type	Low	High	Description
H2O PPM	COA		0.0100	200.0000	.
NAOH%	COA		99.9000	100.0000	.
Chemical	Supplier Name	City	State	Spec #	
NAOH-MEM-ACI	VULCAN	BIRMINGHAM	AL	910088	
Test	Method	Type	Low	High	Description
IRON PPM	COA		0.0100	5.0000	5 ppm Max Iron
NAOH %	COA		49.0000	51.0000	49 - 51 % Naoh
Chemical	Supplier Name	City	State	Spec #	
NAOH-SOLID	CHEMTECH	ST LOUIS,	MO	910075	
Test	Method	Type	Low	High	Description
NAOH	COA		95.0000	100.0000	95% Naoh Min
Chemical	Supplier Name	City	State	Spec #	
NAOH50	VERTEX	Memphis	Tn	910175	
Test	Method	Type	Low	High	Description
NAOH %	COA		48.0000	51.0000	.
Chemical	Supplier Name	City	State	Spec #	
NICKEL	VARIOUS			910110	
Test	Method	Type	Low	High	Description
RAINEY?	OR RQ?		1.0000	3.0000	SPONGE, RAINEY NICKEL
					1 = NO, 2 = YES
Chemical	Supplier Name	City	State	Spec #	
NICKEL CAT.	ACTIVATED METALS	SEVIERVILLE	Tn	910117	
Test	Method	Type	Low	High	Description
NICKEL	COA		2.0000	2.0000	1 for no,, 2 for yes
Chemical	Supplier Name	City	State	Spec #	
NIT.ACID\FMC	EL DORADO CHEMICAL	ST. LOUIS	MO	910138	
Test	Method	Type	Low	High	Description
% H2O	COA		0.0001	0.0001	.
% HNO3	COA		60.0000	85.0000	.
% OLEUM	COA		0.5000	2.5000	.

Chemical	Supplier Name	City	State	Spec #
NITRIC ACID	ELDORADO CHEMICAL	EL DORADO	AR	910007
Test Method	Type	Low	High	Description
NITRIC % COA		98.0000	100.0000	98% Min

Chemical	Supplier Name	City	State	Spec #
NITRIC ACID	ELDORADO CHEMICAL	EL DORADO	AR	910156
Test Method	Type	Low	High	Description
IRON,PPM COA		0.0100	50.0000	Iron, ppm
NITRIC % COA		98.0000	100.0000	.

Chemical	Supplier Name	City	State	Spec #	
NITROGEN	AIR PRODUCTS	DECATUR	AL	910008	
Test	Method	Type	Low	High	Description
OXYG PPM	COA		0.0100	3.0000	3 ppm Oxygen max
WATERPPM	COA		0.0100	3.0000	3 PPM Water max

Chemical	Supplier Name	City	State	Spec #	
NITROGEN	PRAXAIR	MCINTOSH	AL	910186	
Test	Method	Type	Low	High	Description
H2O, PPM	COA		0.0100	5.0000	.
O2, PPM	COA		0.0100	8.0000	.

Chemical	Supplier Name	City	State	Spec #	
NITROMETHANE	AUSTIN CHEMICAL			910128	
Test	Method	Type	Low	High	Description
% NM	COA		99.5000	100.0000	% Nitromethane

Chemical	Supplier Name	City	State	Spec #	
NITROMETHANE	ACETO AGRICULTURAL CHEMS	LAKE SUCCESS	NY	910192	
Test	Method	Type	Low	High	Description
NITMET %	COA		99.5000	100.0000	.

Chemical	Supplier Name	City	State	Spec #	
NITROMETHANE	WEGO	GREAT NECK	NY	910032	
Test	Method	Type	Low	High	Description
NM %	COA		99.5000	100.0000	99.5% min

Chemical	Supplier Name	City	State	Spec #	
NORCAT	VARIOUS			910119	
Test	Method	Type	Low	High	Description
BFG OK'D	none		1.5000	3.0000	1 = no / 2 = yes bfg approved

Chemical	Supplier Name	City	State	Spec #	
ODCB	SOLUTIA	SAUGET	IL	910130	
Test	Method	Type	Low	High	Description
ODCB %	COA		98.5000	100.0000	ODCB %
PDCB %	COA		0.0100	1.0000	PDCB %

Chemical	Supplier Name	City	State	Spec #	
ODCB	STANDARD CHLORINE	DELAWARE CITY,	DE	910009	
Test	Method	Type	Low	High	Description
ODCB %	COA		98.5000	100.0000	98.5% odcB min, .1% pdcB max
PDCB %	COA		0.0100	1.0000	.

Chemical	Supplier Name		City		State	Spec #
ODCB	METACHEM\STANDARD		DELAWARE CITY		DE	910164
Test	Method	Type	Low	High	Description	
ODCB %	COA		98.5000	100.0000	.	
PDCB, %	COA		0.0100	1.0000	.	

Chemical	Supplier Name		City		State	Spec #
ODCB	PPG INDUSTRIES		NATRIUM		WV	910046
Test	Method	Type	Low	High	Description	
ODCB %	COA		98.4999	100.0000	98.5 % min ODCB, 1% max pdcb	
PDCB %	COA		0.0100	1.0000	98.5%min ODCB/ 1.0%PDCB max	

02/23/01 07:27

Raw Materials Acceptance Specs

Page # 12

Chemical	Supplier Name	City	State	Spec #	
ODCB	MONSANTO	SAUGET	IL	910010	
Test	Method	Type	Low	High	Description
ODCB	% COA		98.5000	100.0000	98.5% min odc, 1% max pdcb
PDCB	% COA		0.0100	1.0000	.

Chemical	Supplier Name	City	State	Spec #	
OLEUM \FMC	FMC	GREEN RIVER	WY	910139	
Test	Method	Type	Low	High	Description
% SULF.	COA		104.0000	105.5000	.

Chemical	Supplier Name	City	State	Spec #	
PALLIDIUM	VARIOUS			910171	
Test	Method	Type	Low	High	Description
% PALLID	%		5.0000	100.0000	5% min. Pallidium on Carbon
CARBON	Number		1940.0000	10000.0000	Carbon number 1940 SWR

Chemical	Supplier Name	City	State	Spec #	
PAM	KURRARAY	TOKYO	JP	910029	
Test	Method	Type	Low	High	Description
PAM %	COA		97.0000	100.0000	97% min

Chemical	Supplier Name	City	State	Spec #	
PBA	NIPA HARDWICKE	ELGIN	SC	910025	
Test	Method	Type	Low	High	Description
PBA %	COA		98.5000	100.0000	98.5% min

Chemical	Supplier Name	City	State	Spec #	
PBALD	AMERIBROM	BEER SHEVA, ISRAEL		910051	
Test	Method	Type	Low	High	Description
PBALD %	COA		97.0000	100.0000	97% min

Chemical	Supplier Name	City	State	Spec #	
PCL3	A AND W AMERICAS	CHARLESTON	SC	910049	
Test	Method	Type	Low	High	Description
PCL3 %	COA		99.0000	100.0000	99% min

Chemical	Supplier Name	City	State	Spec #	
PCL3	VARIOUS			910095	
Test	Method	Type	Low	High	Description
%PCL3	from COA		99.5000	100.0000	% PCL3 for Eth 99.5% min

Chemical	Supplier Name	City	State	Spec #
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AB0000025772

PE-DOVER	PERSTORP					910160
Test	Method	Type	Low	High	Description	
ASSAY, %	COA		99.0000	100.0000	.	
H2O, PPM	COA		0.0100	200.0000	.	

Chemical	Supplier Name			City	State	Spec #
PENNSPRAY 70	PENNZOIL CO.			Shreveport	la	910148
Test	Method	Type	Low	High	Description	
NAME	NAME		1.0000	3.0000	1 = NAME DOES NOT MATCH 2 = NAME MATCHES COA	

Chemical	Supplier Name			City	State	Spec #
PENNZPAR 71	ATLAS PROCESSING CO					910052
Test	Method	Type	Low	High	Description	
CHK GRDE	COA		1.0000	3.0000	1 = bad, 2 = good, ok	

02/23/01 07:28

Raw Materials Acceptance Specs

Page # 13

Chemical	Supplier Name	City	State	Spec #	
PERKLONE D	ICI CHEMICALS & POLYMERS	WILMINGTON	DE	910155	
Test	Method	Type	Low	High	Description
H2O, PPM	COA		0.0100	200.0000	
Chemical	Supplier Name	City	State	Spec #	
PHENOL-DOVER	ARISTECH			910157	
Test	Method	Type	Low	High	Description
ASSAY%	COA		99.0000	100.0000	
H2O, PPM	COA		0.0100	200.0000	
Chemical	Supplier Name	City	State	Spec #	
PLATINUM CAT	JOHNSON MATTHEY	WEST DEPTFORD	NJ	910042	
Test	Method	Type	Low	High	Description
PERFORM	TEST		1.0000	3.0000	1=fail, 2=pass
Chemical	Supplier Name	City	State	Spec #	
PROP ANHYD.	EASTMAN CHEMICAL CO.	KINGSPORT	TN	910022	
Test	Method	Type	Low	High	Description
ANHYD %	COA		98.0000	100.0000	98%min
Chemical	Supplier Name	City	State	Spec #	
PROP. ACID	HOECHST-CELANESE	PAMPA, TX	TX	910041	
Test	Method	Type	Low	High	Description
PROP %	COA		98.0000	100.0000	98%min
Chemical	Supplier Name	City	State	Spec #	
PROP. ACID	UNION CARBIDE	CHARLESTON	WV	910020	
Test	Method	Type	Low	High	Description
PROP %	COA		98.0000	100.0000	98%min
Chemical	Supplier Name	City	State	Spec #	
PROP. ACID	EASTMAN CHEMICAL	LONGVIEW	TX	910013	
Test	Method	Type	Low	High	Description
PROP %	COA		98.0000	100.0000	98%min
Chemical	Supplier Name	City	State	Spec #	
PTPM-TETRA	VARIOUS			910181	
Test	Method	Type	Low	High	Description
PTPM %	COA		35.0000	72.0000	
Chemical	Supplier Name	City	State	Spec #	
R118118	ZENECA	UNITED KINGDOM		910014	

AB0000025772

Test	Method	Type	Low	High	Description
R118118%	COA		33.0000	38.0000	R118118% is 33% min-38% max
TOL, %	COA	N	0.0000	0.0000	.

Chemical	Supplier Name	City	State	Spec #
RUBBER	VARIOUS			910101

Test	Method	Type	Low	High	Description
ASH	COA		0.0001	0.2000	ALKYL LITHIUM POLYMERIZED POLYBUTADIENE = RUBBER
COLOR	COA		0.0001	10.0000	APHA ON COA COLOR
DIS.TIME	COA		0.0001	4.0000	DISSOLVING TIME = 4 HOURS MAX
MOONEY V	COA		47.0000	57.0000	ON COA MOONEY VISCOSITY
SOL. VIS	COA		147.0000	177.0000	SOLUTION VISCOSITY OF 5.43% IN TOLUENE
STABILZR	COA		0.5200	1.0800	STABILIZER
TOL.INS	COA		0.0001	0.0100	TOLUENE INSOLUBLES ON COA
TURBIDIT	COA		0.0001	0.0001	TURBIDITY, SPEC. = CLEAR
VIS.GEL	COA		0.0001	0.0001	VISUAL GELS = NIL IS SPEC.
VOL.MAT			0.0001	0.6000	VOLATILE MATTER

Chemical	Supplier Name	City	State	Spec #
SALT	MORTON - SALT (CONE SOLV)	MEMPHIS	TN	910091
Test Method Type	Low High	Description		
SALT % COA	99.5000 100.0000	Salt % 99.5% min		
Chemical	Supplier Name	City	State	Spec #
SALT	CARGILL	MEMPHIS	TN	910027
Test Method Type	Low High	Description		
SALT % COA	99.0000 100.0000	Salt % = 99% min		
Chemical	Supplier Name	City	State	Spec #
SICL4	VARIOUS			910121
Test Method Type	Low High	Description		
PURITY COA/%wt	99.5000 100.0000	the purity is expressed in %weight, 99.5%minimum. Silvestra		
Chemical	Supplier Name	City	State	Spec #
SOD.CARB\FMC	IDEAL	MEMPHIS	TN	910140
Test Method Type	Low High	Description		
% ASSAY COA	99.2000 100.0000	.		
% H2O COA	0.0100 0.2500	.		
% NAO2 COA	58.0000 100.0000	.		
GRADE100 COA	0.0100 2.0000	.		
GRADE160 COA	0.0100 2.0000	.		
Chemical	Supplier Name	City	State	Spec #
SODA ASH	IDEAL	MEMPHIS	TN	910053
Test Method Type	Low High	Description		
MESH 100 COA	1.0000 3.0000	80-100 mesh 1 = no, 2 = yes		
Chemical	Supplier Name	City	State	Spec #
SODA ASH	VARIOUS			910122
Chemical	Supplier Name	City	State	Spec #
STEP 3\DMF	FMC CORP APG	BALTIMORE	MD	910132
Test Method Type	Low High	Description		
% ACTIVE COA	17.0000 20.0000	.		
Chemical	Supplier Name	City	State	Spec #
STEPPAC 8170	STEPAN	WINDER	GA	910035
Test Method Type	Low High	Description		
PERFORM PROP-7	1.0000 3.0000	1 = fail, 2 = pass		
Chemical	Supplier Name	City	State	Spec #
STEROLS	ARCHER DANIEL MIDLAND	DECATUR	GA	910172

Test	Method	Type	Low	High	Description
STEROLS	% COA		90.0000	100.0000	TOTAL FREE STEROLS

Chemical	Supplier Name	City	State	Spec #
STEROLS	HENKLE CHEMICALS			910173

Test	Method	Type	Low	High	Description
STEROLS	% COA		90.0000	100.0000	.

Chemical	Supplier Name	City	State	Spec #
SULF ACD	ELDORADO CHEMICAL	EL DORADO	AR	910079

Test	Method	Type	Low	High	Description
IRON PPM	COA		0.0100	40.0000	Iron ppm is 40 max, Sulf % is 93% min, Water % 7 max
SULF	% COA		98.0000	100.0000	Sulfuric Acid %

Chemicals Division
Pampa Plant

Celanese Ltd.
Highway 60 West
PO Box 937
Pampa, TX 79065
806 665 1801

Celanese
CHEMICALS

PRODUCT QUALITY REPORT

CEDAR CHEMICAL COMPANY
Hwy 242 South
West Helena, AR 72390

Attn: Lisa Walker

Your Order No: 02-022101

Our Order No: 309135

Container No: Groendyke
3418.

Compartment No:

Destination: W. Helena, AR

Date Shipped: 022802

ACETIC ANHYDRIDE

SPECIFICATIONS -----	LIMITS -----	RESULTS (1) -----
Acetic Anhydride, wt. %	min 99.50	99.82
Acetic Acid, wt. %	max 0.50	.14
Color, Pt-Co units	max 10	3.
Permanganate Time, minutes	min 10	11.
Aluminum, ppm	max 1	<1.0
Iron, ppm	max 1	<1.0
Heavy Metals as Lead, ppm	max 1	<1.0
Nonvolatile Matter, g/100ml	max 0.003	<0.003
Chlorides, ppm	max 1	<1
Total Sulfur, ppm	max 1	<1

Released by: V. Anderson

If you have any questions regarding this shipment, please contact the customer service representative for your district.

(1) Unless otherwise indicated as shipment specific (*), the results in this report are representative of the shipping inventory.

Celanese

Celanese Chemicals
A business of Celanese Inc.

AB0000025799

Chemical	Supplier Name	City	State	Spec #
SULF ACD DCA	ELDORADO CHEMICAL	EL DORADO	AR	910080
Test Method Type	Low	High	Description	
SULF % COA	98.0000	100.0000	Sulf % is 98% min	

Chemical	Supplier Name	City	State	Spec #
SULF ACD DIR	ELDORADO CHEMICAL	EL DORADO	AR	910081
Test Method Type	Low	High	Description	
SULF % COA	93.0000	100.0000	Sulf % is 93% min	

Chemical	Supplier Name	City	State	Spec #
SULF ACD TA	ELDORADO CHEMICAL	EL DORADO	AR	910082
Test Method Type	Low	High	Description	
SULF % COA	93.0000	100.0000	sulf % = 93% min	

Chemical	Supplier Name	City	State	Spec #
SULF.ACD\FMC	CHEMTECH.	MEMPHIS	TN	910141
Test Method Type	Low	High	Description	
% ASSAY COA	93.0000	100.0000	.	

Chemical	Supplier Name	City	State	Spec #
SULFURIC EO	VARIOUS			910096
Test Method Type	Low	High	Description	
%ACTIVE FROM COA	97.0000	100.0000	SULFURIC FOR SCRUBBER, % Active is 97% min	

Chemical	Supplier Name	City	State	Spec #
T-500 SOLVNT	MOBIL CHEMICAL	CHALMETTE	LA	910054
Test Method Type	Low	High	Description	
CHK GRDE COA	1.0000	3.0000	1 = fail, 2 = pass	

Chemical	Supplier Name	City	State	Spec #
TAP-ANTIBLZE	A AND W AMERICAS	CHARLESTON	SC	910185
Test Method Type	Low	High	Description	
COA GRADE N	0.0000	0.0000	coa for antiblaze	

Chemical	Supplier Name	City	State	Spec #
TENNECO AV-1	CONE SOLVENTS	MEMPHIS	TN	910109
Test Method Type	Low	High	Description	
AV-1 GRD	1.0000	3.0000	1 = is not the right grade, 2 = is the right grade	

Chemical	Supplier Name	City	State	Spec #
TEPA	VARIOUS			910124
Test Method Type	Low	High	Description	

02/23/01 07:28

Raw Materials Acceptance Specs

Page # 16

Chemical	Supplier Name	City	State	Spec #	
TOLUENE/FMC	FMC	GREEN RIVER	WY	910142	
Test	Method	Type	Low	High	Description
SULFEN%	COA	N	0.0000	0.0000	.

Chemical	Supplier Name	City	State	Spec #	
TOXIMUL 804	STEPAN	WINDER	GA	910016	
Test	Method	Type	Low	High	Description
PERFORM	PROP-7	PROP-7		1.0000	3.0000 1 = fail, 2= pass

Chemical	Supplier Name	City	State	Spec #	
TPP-DOVER	DOVER CHEMICAL	DOVER	OH	910159	
Test	Method	Type	Low	High	Description
ASSAY %	COA		97.0000	100.0000	Assay %
COLOR	COA		0.0100	50.0000	.

Chemical	Supplier Name	City	State	Spec #	
TPP-TETRA	VARIOUS			910180	
Test	Method	Type	Low	High	Description
TPP %	COA		28.0000	65.0000	.

Chemical	Supplier Name	City	State	Spec #	
XYLENE	CONE SOLVENTS	MEMPHIS	TN	910193	
Test	Method	Type	Low	High	Description
XYLENE %	coa	G	99.5000	0.0000	.

Chemical	Supplier Name	City	State	Spec #	
XYLENE-CYCLA	CONE SOLVENTS	MEMPHIS	TN	910195	
Test	Method	Type	Low	High	Description
XYLENE %	COA	G	99.5000	0.0000	.

Chemical	Supplier Name	City	State	Spec #	
XYLENE-DOVER	CONE SOLVENTS	MEMPHIS	TN	910161	
Test	Method	Type	Low	High	Description
ASSAY %	COA		95.0000	100.0000	.
H2O, PPM	COA		0.0100	200.0000	.

AB0000025799

%TEPA coa 90.0000 100.0000 tepa for dca storage

Chemical	Supplier Name	City	State	Spec #
THIONYL CHLD	BAYER CHEMICALS	BAYTOWN	TX	910017
Test Method	Type	Low	High	Description
THIOCHL% COA		99.0000	100.0000	99% min

Chemical	Supplier Name	City	State	Spec #
TOLUENE	EXXON	HOUSTON	TX	910019
Test Method	Type	Low	High	Description
TOLUEN % COA		97.0000	100.0000	% Tol 97% min, % water .05 max
WATER % COA		0.0100	0.0500	0.05%max

PURCHASE REQUISITION

Revision D



49 Phillips Road 311

Helena, Arkansas 72342

Phone: 870-572-3701 Fax: 870-572-3795

Website - www.cedarchem.com

PURCHASE ORDER NUMBER

01-020278

Terms: Net 30 Net 45 Net 60 Net 90 Other: _____

PURPOSE _____

ACCOUNT NO. _____

DATE 2-28-01

Item	Quantity	Unit	Description and Code	Price/Unit
	376.10	#	LIQUID ODCB	.31
			Ship from Sangre IL	
			rec'd 3/12	
			1. TLX 220829 1 3/1 3/12	
			2. 3/23 -	
			1. TLX 220829 LIQUID 3/12	
			2.	
			(1 3/12)	
			(2 3/12)	
			(3 3/12)	

Vendor Information: No. _____

Supplier pays Freight Cedar pays Freight Ship via _____

Name Solutia

P.O. Box _____

Scheduled Delivery date _____ Freight / Tax \$ _____

Street _____

City _____

State _____ Zip _____

TOTAL REQUISITION AMOUNT \$ _____

Submitted by _____

Fax the Purchase Order to: _____

Approved by [Signature]

Fax No: _____

FOR INTERNAL USE ONLY

CEDAR WORK ORDER NO. _____

WAREHOUSE / UNIT DESIGNATION _____

CEDAR REQUISITION NO. _____

NO 1897

PURCHASE REQUISITION

Revision D



49 Phillips Road 311

Helena, Arkansas 72342

Phone: 870-572-3701 Fax: 870-572-3795

Website - www.cedarchem.com

PURCHASE ORDER NUMBER
01-020337
~~01-020330~~

Terms: Net 30 Net 45 Net 60 Net 90
 Other: _____

PURPOSE _____ ACCOUNT NO. _____ DATE 02-28-01

Item	Quantity	Unit	Description and Code	Price/Unit
	376.10	#	411000 OTCIP	.31
			Slip from N/A	
			1. 3/19 SHK 2001571 - 100000	
			2. 3/28 SHK 2001571	
			ARRIVE 3/20	
			SHK 2001571	

Vendor Information: No.

Name Pike

P.O. Box _____

Street _____

City _____

State _____ Zip _____

Supplier pays Freight Cedar pays Freight Ship via _____

Scheduled Delivery date _____ Freight / Tax \$ _____

TOTAL REQUISITION AMOUNT

Fax the Purchase Order to: _____

Fax No. _____

Submitted by _____

Approved by KW

-----FOR INTERNAL USE ONLY-----

CEDAR WORK ORDER NO. **WAREHOUSE / UNIT DESIGNATION** **CEDAR REQUISITION NO.**



W. G. Krummrich Plant

Sauget, IL 62208-1199

Phone (618) 482-6464

FAX (618) 482-6509

Certificate of Analysis

**CEDAR CHEMICAL CORPORATION
ATTN: QUALITY CONTROL MANAGER
WEST HELENA PLANT
HIGHWAY 242 SOUTH
W. HELENA, AR 72390**

FAX TO: 870-872-3795

**Product: ORTHO DICHLOROBENZENE
Shipment No: 900329040
Delivery No: 380447470
Order No: 300254315
Lot Number: KB2014**

**Customer P.O. No: 01-020278
Customer Code:
Date Manufactured: 3/2/01
Date Shipped: 3/2/01
Shipped Via: ITLX 220829**

CHARACTERISTICS	DETERMINED	SPECIFICATIONS
Appearance	PASSES	
Color, Apha	10	15 Maximum
Water, %	0.001	0.010 Maximum
PDCB, %	0.57	0.90 Maximum
Assay, %	99.33	99.00 to 100.00
TCB, %	0.01	

Comments:

**Monika G. Lorenz
Q. C. Business Team Leader**

ISO 9002 REGISTERED, BSI CERTIFICATE NUMBER FM 14385



PPG INDUSTRIES, INC.
NATRIUM WV

**CERTIFICATE OF ANALYSIS
AND
NOTICE OF SHIPMENT**

SHIP TO CEDAR CHEMICAL CORPORATION
ATTN: LISA WALKER
49 PHILLIPS ROAD 311
HIGHWAY 242 SOUTH
WEST HELENA AR 72390
FAX: 870-572-3795

DATE ISSUED 03/09/2001 02:04 P.M.
BY

MARK J. SINCLAIR
CUSTOMER QUALITY ASSURANCE DEPT
(304-455-6701)

DATE SHIPPED	PPG ORDER NO.	CUSTOMER ORDER NO.	CUSTOMER PRODUCT CODE	
03/09/2001	669682-3	01-020278		
TRUCK	FREIGHT	TOTAL WEIGHTS (Bulk Only, Billing Shown if Applicable)		
70199	PPD	GROSS 74900	TARE 32040	NET 42860
ROUTE		BILLING		

QLYC001 QUALITY CARRIERS, INC.

This is to certify that the products shipped below by PPG Industries, Inc. meet or exceed all analysis standards.

PRODUCT DESCRIPTION: ORTHO DCB-GRADE F

PROPERTY	UNIT OF MEASURE	RESULT	CUSTOMER SPECIFICATIONS	
			MINIMUM	MAXIMUM
P-DCB	%WT	0.73		1.0
O-DCB	%WT	99.19	98.5	

Mark Sinclair



PPG INDUSTRIES, INC.
NATRIUM WV

**CERTIFICATE OF ANALYSIS
AND
NOTICE OF SHIPMENT**

SHIP TO CEDAR CHEMICAL CORPORATION
ATTN: LISA WALKER
49 PHILLIPS ROAD 311
HIGHWAY 242 SOUTH
WEST HELENA AR 72390
FAX: 870-572-3795

DATE ISSUED 03/09/2001 04:20 P.M.
BY

MARK J. SINCLAIR
CUSTOMER QUALITY ASSURANCE DEPT
(304-455-6701)

DATE SHIPPED	PPG ORDER NO.	CUSTOMER ORDER NO.	CUSTOMER PRODUCT CODE		
03/09/2001	669686-2	01-020278			
TRUCK	FREIGHT	TOTAL WEIGHTS (Bulk Only, Billing Shown if Applicable)			
70147	PPD	GROSS	TARE	NET	BILLING
		75100	32040	44060	

ROUTE

QLYC001 QUALITY CARRIERS, INC.

This is to certify that the products shipped below by PPG Industries, Inc. meet or exceed all analysis standards.

PRODUCT DESCRIPTION: ORTHO DCB-GRADE F

PROPERTY	UNIT OF MEASURE	RESULT	CUSTOMER SPECIFICATIONS	
			MINIMUM	MAXIMUM
P-DCB	%WT	0.71		1.0
O-DCB	%WT	99.18	98.5	

Mark Sinclair



PPG INDUSTRIES, INC.
NATRIUM WV

**CERTIFICATE OF ANALYSIS
AND
NOTICE OF SHIPMENT**

SHIP TO CEDAR CHEMICAL CORPORATION
ATTN: LISA WALKER
49 PHILLIPS ROAD 311
HIGHWAY 242 SOUTH
WEST HELENA AR 72390
FAX: 870-572-3795

DATE ISSUED 03/12/2001 08:14 A.M.
BY MARK J. SINCLAIR
CUSTOMER QUALITY ASSURANCE DEPT
(304-455-6701)

DATE SHIPPED	PPG ORDER NO.	CUSTOMER ORDER NO.	CUSTOMER PRODUCT CODE		
03/09/2001	667158-0	01-020337			
RAIL CAR	FREIGHT	TOTAL WEIGHTS (Bulk Only, Billing Shown if Applicable)			BILLING
SHPX220757	PPD	GROSS 253100	TARE 68400	NET 184700	

ROUTE CSXT001 CSXT-(ESTL)-UP

This is to certify that the products shipped below by PPG Industries, Inc. meet or exceed all analysis standards.

PRODUCT DESCRIPTION: ORTHO DCB-GRADE F

PROPERTY	UNIT OF MEASURE	RESULT	CUSTOMER SPECIFICATIONS	
			MINIMUM	MAXIMUM
P-DCB	%WT	0.9		1.0
O-DCB	%WT	99.03	98.5	

Mark Sinclair



PPG INDUSTRIES, INC.
NATRIUM WV

**CERTIFICATE OF ANALYSIS
AND
NOTICE OF SHIPMENT**

SHIP TO CEDAR CHEMICAL CORPORATION
ATTN: LISA WALKER
49 PHILLIPS ROAD 311
HIGHWAY 242 SOUTH
WEST HELENA AR 72390
FAX: 870-572-3795

DATE ISSUED 03/12/2001 08:14 A.M.
BY

MARK J. SINCLAIR
CUSTOMER QUALITY ASSURANCE DEPT
(304-455-6701)

DATE SHIPPED	PPG ORDER NO.	CUSTOMER ORDER NO.	CUSTOMER PRODUCT CODE
03/09/2001	667158-0	01-020337	
RAIL CAR	FREIGHT	TOTAL WEIGHTS (Bulk Only, Billing Shown if Applicable)	
SHPX220757	PPD	GROSS	NET
		253100	68400
ROUTE			BILLING
CSXT081			184700

CSXT081 CSXT-(ESTL)-UP

This is to certify that the products shipped below by PPG Industries, Inc. meet or exceed all analysis standards.

PRODUCT DESCRIPTION: ORTHO DCB-GRADE F

PROPERTY	UNIT OF MEASURE	RESULT	CUSTOMER SPECIFICATIONS	
			MINIMUM	MAXIMUM
P-DCB	%WT	0.9		1.0
O-DCB	%WT	99.03	98.5	

Mark Sinclair



PPG INDUSTRIES, INC.
NATRIUM WV

**CERTIFICATE OF ANALYSIS
AND
NOTICE OF SHIPMENT**

SHIP TO CEDAR CHEMICAL CORPORATION
ATTN: LISA WALKER
49 PHILLIPS ROAD 311
HIGHWAY 242 SOUTH
WEST HELENA AR 72390
FAX: 870-572-3795

DATE ISSUED 03/12/2001 08:14 A.M.
BY MARK J. SINCLAIR
CUSTOMER QUALITY ASSURANCE DEPT
(304-455-6701)

DATE SHIPPED	PPG ORDER NO.	CUSTOMER ORDER NO.	CUSTOMER PRODUCT CODE	
03/09/2001	667158-0	01-020337		
RAIL CAR	FREIGHT	TOTAL WEIGHTS (Bulk Only, Billing Shown if Applicable)		
SHPX220757	PPD	GROSS	TARE	NET
		253100	68400	184700
BILLING				

ROUTE CSXT081 CSXT-(ESTL)-UP

This is to certify that the products shipped below by PPG Industries, Inc. meet or exceed all analysis standards.

PRODUCT DESCRIPTION: ORTHO DCB-GRADE F

PROPERTY	UNIT OF MEASURE	RESULT	CUSTOMER SPECIFICATIONS	
			MINIMUM	MAXIMUM
P-DCB	%WT	0.9 ✓		1.0
O-DCB	%WT	99.03 ✓	98.5	

Handwritten signature/initials

Mark Sinclair

LWalker

From: "David Parker" <dparker@cvrtmail.com>
To: "L Walker" <lwalker@cvrtmail.com>
Cc: "joel walker" <JWALKER@CVRTMAIL.COM>; "Jim Rone" <jrone@cvrtmail.com>; "greg satterfield" <gregs@cvrtmail.com>
Sent: Wednesday, May 22, 2002 10:46 AM
Subject: sodium methoxide
 Lisa,

Here's the count on the sodium methoxide we have packed out. Let me know if you have any questions.

SODIUM METHOXIDE PKG'ED FROM T-5213 ON 3-13-01

Drum No. Net Wt. (lbs.)

1	444
2	425
3	432
4	420
5	428
6	417
7	424
8	418
9	422
10	413
11	427
12	445
13	270

Total 5383 net lbs.

SODIUM METHOXIDE PKG'ED FROM T-5213 ON 5-21-02

Drum no. Net Wt. (lbs.)

1-22	407
23	84

Total 9038 net (lbs.)

TOTAL LBS. OF SODIUM METHOXIDE IN DRUMS - 14,421 LBS.

5/22/2002

AB0000012636

RAW MATERIAL RECEIVING RECORD No 20352

CEDAR CHEMICAL 9000-1 REV: C

TIME IN AT GATE
15:30

RECEIVED BY
D Parker

SECTION 1

DATE	ORDER NO	CAR OR TRUCK NO	DECLARED WEIGHT
3/23/02	659672	6167	Net

SHIPPER	CARRIER
Aventis / Russell Stanley	Transcarriers

QUANTITY	CONTAINER	DESTINATION	RAW MAT CODE #	DESCRIPTION
480	B/T	UNIT 5	N/A	mt drums

COMMENTS

SECTION 2

RECIPIENT	TIME SAMPLE/CERTIFICATE TAKEN TO LAB
D Parker	

UNLOADED AT (tank number, unit, warehouse, etc.)
Dropped trailer at unit 5

COMMENTS
Use as needed for pack-out of Cyclanibdes

SECTION 3

LAB TECHNICIAN	ACCEPT	REJECT	REASON FOR REJECTION

COMMENTS

SECTION 4

SHIFT SUPERVISOR	ACCEPT	REJECT	REASON FOR REJECTION

PLANT WEIGHT	UNLOADING TIMES	
NET	START TIME	END TIME

COMMENTS

STRAIGHT BILL OF LADING - SHORT FORM - ORIGINAL - NOT NEGOTIABLE

RECEIVED, subject to the classifications and legally filed tariffs in effect on the date of the issue of the Bill of Lading.

TRC 6167

BILL OF LADING #

PAGE 1

TRK 9036

233500

FROM:



Russell-Stanley

An Industrial Container Supply Chain Management Company

AT: 356 W. 19th St., Reserve, LA 70084
(504) 536-4200

TICKET DATE	SHIPPED VIA	TRAILER #	DRIVER	DELIVERY TIME	SHIP TO
03/25/02	TRANS CAR	11711			THIRD PARTY

SHIP TO: 102228 0000
AVENTIS CROP SCIENCE/CEDAR
49 PHILLIPS ROAD # 311
HELENA AR 72342 US
CEDAR CHEMICAL CORPORATION

R.S. ORDER #	CUSTOMER AC. #	C.O.D. \$	AND REMIT TO:
233500	659672		356 W. 19th St. Reserve, LA 70084

QUANTITY SHIPPED	PART NUMBER	DESCRIPTION	AMOUNT
480	03004ECUDX	POLYDRUM 30G DELEX OPEN EURO BLU	.000
480		SHIP EXACT QUANTITY OF 480 DRUMS. SHIP VIA TRANS CARRIERS. BILL THIRD PARTY FREIGHT TO: AVENTIS CROPSCIENCE USA LP PO BOX 13985, RESEARCH TRIANGLE PARK, NC 27709	.000

Cedar Chem 3/23/02

If the shipment moves between two ports by a carrier by water, the law requires that the bill of lading shall state whether it is carrier's or shipper's weight.
NOTE: Where the rate is dependent on value, shippers are required to state specifically in writing the agreed or declared value of the property.
The agreed or declared value of the property is hereby specifically stated by the shipper to be not exceeding per

Subject to Section 7 of conditions applicable bill of lading, if this shipment is to be delivered to the consignee with recourse on the Consignor, the Consignor shall sign the following statement:
The carrier shall not make delivery of this shipment without payment of freight and all other lawful charges.

This is to certify that the above named materials are properly classified, described, packaged, marked and labeled and are in proper condition for transportation according to the applicable regulations of the Department of Transportation.

The carrier shall not make delivery of this shipment without payment of freight and all other lawful charges.

Carrier is responsible to notify Russell-Stanley immediately of any alteration of this document to 504-536-4200 to the Traffic Mgr.

CERTIFICATE OF CONFORMANCE

This certifies that all Non-removable head (UN 1H1, UN 1A1 and 3H1) and Removable head (UN 1H2 and 1A2) drums, manufactured by RUSSELL-STANLEY CORP. in accordance with the standards set forth in Part 178 Subpart L - Non-bulk Performance Oriented Packaging Standards - of Title 49 Code of Federal Regulations-Transportation (current edition) and subsequent revisions appearing in the Federal Register during current calendar year have been successfully qualification tested for their respective design types in accordance with the requirements for packaging given in Part 178 Subpart M - Testing of Non-bulk Packagings and Packages - Title 49 CFR and when prepared for shipment using the closures supplied and / or specified and closed as instructed by RUSSELL-STANLEY CORP are capable of meeting the performance standards indicated by the drum markings applied in accordance with 49 CFR § 178.503. Furthermore, the marking on the drum is certification of this capability as stated in § 178.2 (b), 49 CFR.

[Signature]
(Signature of Consignor)

If charges are to be prepaid, write stamp here, "To be Prepaid."

Signed Russell-Stanley Bill of Lading Required For Process of Payment For Carrier.

Received \$ _____ to _____

apply in prepayment of the charges on property described hereon

Agent or Cashier

Per _____
(The signature here acknowledges only the amount prepaid)

Charges Advanced \$ _____

Shipper's imprint in lieu of stamp; not a part of bill of lading approved by the Interstate Commerce Commission

The Fibre Boxes used for this shipment conform to the specifications set forth in box maker's certificate thereon, and all other requirements of Rule 41 of the Consolidated Freight Classification.

Plastic Container OTE 156.600 sub# _____

New Steel Drums 55 Gallon Empty. Gauge _____

Customer Arrival Time _____ Departure Time 7:25:22

Customer Signature: _____ Date: _____

Russell-Stanley SHIPPER PER *[Signature]* Agent, Per _____

Permanent Address of Shipper: 356 W. 19th St., Reserve, LA 70084



POLYETHYLENE

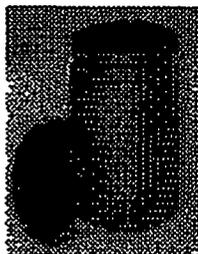
30 GALLON
OPEN HEAD
SHIPPING CONTAINER

This Mauser-design container can be used with a wide range of products, from food to solid hazardous materials.

Features:

- Heavy duty HDPE construction.
 - Galvanized steel or plastic closing ring available.
 - Easy to handle with a drum dolly or forklift truck.
 - Available in blue to meet FDA product requirements.
 - Large-top opening assures easy access to the stored lading.
 - High UN rating at 1H2/200/S, covering most uses for plastic open tops.
 - Nestable version for column stacking when full.
- [Click for detailed specs](#)





QUALITY:
All Russell-Stanley products are manufactured under a total quality management system that minimizes variation and waste. To ensure process integrity, our blow-molding method includes a statistical control process that continuously monitors up to eleven parameters. In addition, the quality system used at our manufacturing plants is certified to ISO 9002 standards. We have also earned the MIPi quality symbol, a new international standard for plastic drums.

POLYETHYLENE

30 GALLON OPEN HEAD SHIPPING CONTAINER

STANDARD
DOT: UN 1H2/Y200/S
MATERIAL: High Molecular Weight, High Density Polyethylene
STANDARD DRUM COLOR: Blue
FDA: Blue drums only. Requires EPT gaskets.
CONSTRUCTION: Blow molded.
CAPACITY: Rated 114 liters (30 gallons)
DIMENSIONS: Diameter: 489 mm (19.3 in.); Height: 791 mm (31.1 in.)
NOMINAL TARE WEIGHT: 6.8 kg (15.0 lbs.)
OCEAN CUBE (TWEED'S ACCURATE): 6.476 ft.³
LID: Injection molded, low density polyethylene World Star™ lid with natural rubber gasket. Gasket is FDA compliant.
CLOSURES: Fully removable polyethylene lid with galvanized steel clamp closing ring. All plastic closing ring is also available.
EMBOSSING: Custom embossing available. Minimum quantities required.
HANDLING: Handle with drum dolly or on pallets.

FOR MORE INFORMATION CALL: (908) 203-9500
INTERNET ADDRESS: www.russell-stanley.com



The information in this document provides a general description of a Russell-Stanley product. It is not a comprehensive specifications guide. It is the customer's sole responsibility to ensure that the Russell-Stanley packaging selected is capable of safely containing the product to be packaged. Containers should not be pressurized or used as long-term storage containers.

RAW MATERIAL RECEIVING RECORD

No 20044

CEDAR CHEMICAL 9000-1 REV: C

TIME IN AT GATE 1020	SECTION 1	RECEIVED BY DW
--------------------------------	-----------	--------------------------

DATE	ORDER NO.	CAR OR TRUCK NO.	DECLARED WEIGHT
2/16/02	Qwentia	4245	Net 39900

SHIPPER Qwentia	CARRIER Enterprise
---------------------------	------------------------------

QUANTITY	CONTAINER	DESTINATION	RAW MAT CODE #	DESCRIPTION
1	T/T	unit 5	NA	sodium methylate

COMMENTS
driver had C of A

SECTION 2

RECIPIENT	TIME SAMPLE/CERTIFICATE TAKEN TO LAB
C. Leslie	1100

UNLOADED AT (tank number, unit, warehouse, etc.)
T-5213 unit 5

COMMENTS

SECTION 3

LAB TECHNICIAN	ACCEPT	REJECT	REASON FOR REJECTION
CT	<input checked="" type="checkbox"/>	<input type="checkbox"/>	

COMMENTS
Sodium Methylate: 25.5

SECTION 4

SHIFT SUPERVISOR	ACCEPT	REJECT	REASON FOR REJECTION
J. [Signature]	<input checked="" type="checkbox"/>	<input type="checkbox"/>	

PLANT WEIGHT NET 39.860	UNLOADING TIMES	
	START TIME	END TIME

COMMENTS

WEIGHED ON A FAIRBANKS SCALE

DATE 2-10-02

CUSTOMERS NAME Cedar Chemical

ADDRESS Halena Hwy

COMMODITY _____

CARRIER _____

REMARKS

71600 10:21AM FE 16 02
31740 03:15PM FE 16 02

LBS. GROSS _____
LBS. TARE - DRIVER ON _____ OFF _____
LBS. NET @ _____ PER LB. PRICE _____

79.860

SHIPPER _____

FAIRBANKS SCALES CO. 31740 03:14 PM FE 16 02

WEIGHER _____

RAW MATERIAL RECEIVING RECORD

No 19969

CEDAR CHEMICAL 9000-1 REV: C

TIME IN AT GATE

RECEIVED BY
DLW

SECTION 1

DATE ORDER NO. CAR OR TRUCK NO. DECLARED WEIGHT

2/5/02 *Qwentia* *1815* Net *34,708*

SHIPPER: *Qwentia* CARRIER: *Blackhawk*

QUANTITY	CONTAINER	DESTINATION	RAW MAT CODE #	DESCRIPTION
<i>78</i>	<i>drums</i>	<i>warehouse</i>	<i>N/A</i>	<i>CPDM</i>

COMMENTS
no Col A OK to enter by David Parker

SECTION 2

RECIPIENT TIME SAMPLE/CERTIFICATE TAKEN TO LAB

Benn Jordan *10:58*

UNLOADED AT (tank number, unit, warehouse, etc.)

COMMENTS

SECTION 3

LAB TECHNICIAN ACCEPT REJECT REASON FOR REJECTION

COMMENTS

SECTION 4

SHIFT SUPERVISOR ACCEPT REJECT REASON FOR REJECTION

PLANT WEIGHT UNLOADING TIMES
NET START TIME END TIME

COMMENTS

RAW MATERIAL RECEIVING RECORD

No 19975

CEDAR CHEMICAL 9000-1 REV: C

TIME IN AT GATE
14:50

RECEIVED BY
mc

SECTION 1

DATE: 7-6-02 ORDER NO: *AVENUS* CAR OR TRUCK NO: *EXFU 38001-5* DECLARED WEIGHT: *44180 lbs*
Net ~~38000~~

SHIPPER: *AVANTIS*

CARRIER: *Gulf States*

QUANTITY	CONTAINER	DESTINATION	RAW MAT CODE #	DESCRIPTION
<i>R. 59540kg</i>	<i>T/T</i>	<i>UNIT #5</i>	<i>N/A</i>	<i>Sodium methylate</i>

COMMENTS: *C of A IN lab*

SECTION 2

RECIPIENT: *D. Lawson* TIME SAMPLE/CERTIFICATE TAKEN TO LAB: *15:45*

UNLOADED AT (tank number, unit, warehouse, etc.): *T-5213 Unit-5*

COMMENTS: *Material is 150°F cooling to 120°F before unloading*

SECTION 3

LAB TECHNICIAN: *TLP* ACCEPT: REJECT: REASON FOR REJECTION:

COMMENTS:

SECTION 4

SHIFT SUPERVISOR: *[Signature]* ACCEPT: REJECT: REASON FOR REJECTION:

PLANT WEIGHT: *NET 44.120* UNLOADING TIMES: START TIME: *0200* END TIME: *0730*

COMMENTS: *Manway Gasket was bad*

WEIGHED ON A FAIRBANKS SCALE

DATE 7/6/02

CUSTOMER NAME Cedar Chem

ADDRESS 40 Phillips Rd #311 Helena AR 72342

COMMODITY Sodium methyate Solution

CARRIER Gulf States

REMARKS

LBS. GROSS

LBS. TARE - DRIVER ON _____ OFF

LBS. NET @ _____ PER LB. PRICE _____

SHIPPER _____

WEIGHER Paul Hightower

78348 02:51PM FE 06 02

34220 07:50AM FE 07 02

FAIRBANKS SCALE DAY. 089908 44.120

FAIRBANKS SCALES WEIGHING 1-800-541-0322

Shipper
**TABY SCHIFFFAHRTS- UND
 SPEDITIONS GMBH**
 HAMBURG
 AS AGENT OF DEGUSSA AG

Combined Transport BILL OF LADING
No.: 42-2365



Tankcontainer Services

**D-20095 Hamburg
 Meßberg 4 - Danske Hus
 Tel.: (040) 35 09 08-30
 Fax: (040) 35 09 08-37**

E-Mail: tabyhamburg@taby.de

Consignee (if "to Order" so indicate)
CREANOVA INC.
 379 INTERPACE PARKWAY
 BUILDING C
 07054 PARSIPPANY, NJ
 FAX: 001-973-541-8070

Notify Party (No claim shall attach for failure to notify)
BDP INTERNATIONAL
 ATTN. LAURA O'CONNOR

 147-31 176TH STREET
 USA- JAMAICA, NY 11434

Place of Receipt LUELSDORF	Place of Delivery HELENA, AR	Place and Date of Issue HAMBURG, 10.12.01	
Port of Loading ROTTERDAM	Port of Discharge HOUSTON		
Vessel SEALAND FLORIDA	Voyage	Option DOOR/DOOR	Number of Original Bq/L 0/NONE

Container Serial no. (and Seal no.)	Number of Packages or Shipping Units	PARTICULARS OF CARGO AS DECLARED BY SHIPPER Description of goods	Net Cargo Payload	Tare Weight	Gross Weight
ICTU 240190-3	3	NM 30/SODIUM-METHYLATE-SOLU TION 30 %/TANK CONTAINER IMDG 3.3 UN 1289 FLPT+32DCE MFAG 306/705 EMS3-04 PKGIII ORDER:40510368,40510045, 40503208 0030441927+25, 0030420093,6284890,6284870 PO 546888/40+6202220 RES:410325000865 EXPRESS RELEASE	19740	3980	23720
BVIU 424045-2			19760	3980	23740
EXFU 380011-5			20040	3900	23940

DECLARATION OF HAZARDOUS/DANGEROUS MATERIALS

IMO class: **3.3** UN-No. **1289**

Fleshpoint: **+ 32 DCEL** DOT 48 CFR Part. 173 Sub - C Class/label: **Subsidiary risk:**

Page: **1** Certified on behalf of shipper by: **DEGUSSA AG, MARL** date: **10.12.01**

This is to certify that the a/m material is properly described, classified and labeled according to regulations of US-Dept. of Transportation and the provisions of the IMO International Maritime Dangerous Goods Code as follows: **SODIUM METHYLATE, SOLUTION**

For Delivery of Goods apply to Messrs.
TABY AMERICA, INC.
 1150 HARTAN ROAD SUITE 104
 CRANFORD, NJ 07016 / USA
 TEL. 1-908-931 1700

SPECIAL REMARKS: (cargo or temperature control/special handling/
 cleaning etc):
**CHEMTREC EMERGENCY CHEMICAL RESPONSE
 TEL. NUMBER: 800-424-9300**

Freight & Charges	Chargeable Units	Rate	Prepaid	Collect
FREIGHT PREPAID			*AS AGREED*	

Received in apparent good order and condition except as otherwise noted the total number of containers or other packages or units enumerated below for transportation from the place of receipt to the place of delivery subject to the terms hereof. One of the original Bills of Lading must be surrendered duly indorsed in exchange for the

hardly had been made between them. In witness whereof Bills of Lading of the tenor and date having been signed one of which being accomplished the others to stand void.
ACTUALLY SHIPPED ON BOARD



SHIPPING ORDER

must be legibly filled in, in ink, in Indelible Penroll, or in Carbon, and retained by the Agent

Received, subject to all terms and conditions of the contract in effect between shipper and Carrier on the date of issue of this Bill of Lading, the property described below in apparent good order except as noted. In the event no contract is in effect, the Terms and Conditions of the Uniform Domestic Straight Bill of Lading as set forth in the appropriate rail or motor classification shall apply.

CONSIGNEE:

AVENTIS CROPSCIENCE USA
C/O CEDAR CHEMICAL CORPORATION
49 PHILLIPS RD #311
HELENA AR 72342
USA

CONSIGNOR (SHIPPER):

Aventis CropScience USA LLP
c/o Blackhawk Warehouse
407 Phillips 311 Road
Helena AR 72342
USA

B/L NO.

80126056

Page: 1 of 1

Date: February 05, 2002

CARRIER: ALT CARRIER

VEHICLE NO.: *BMVA 181S*

FREIGHT CHARGES: Prepaid

Carrier: Attach memorandum copy of Bill of Lading to Freight Bill and send

AVENTIS CROPSCIENCE C/O FTS
C/O FTS FREIGHT PAYMENT PLAN
P. O. BOX 1259
SOMERVILLE NJ 08876-1259

24 HOUR EMERGENCY TELEPHONE NUMBER:

1-800-424-9300

SEAL NOS.

QUANTITY	MATERIAL NO.:HM	DESCRIPTION	CLASS	ID	P.G.	NAERG	WEIGHT
78 Pieces	130277	CHEMICALS, N.O.I. CDM DRMP 1X200KG To deliver Feb 5th. <i>Lot # 01-96V = 70 01-9011 = 8 78</i> <i>Bearie Fogel</i>					34,788 LB

This is to certify that the above-named materials are properly classified, described, packaged, marked and labeled, and are in proper condition for transportation according to the applicable regulations of the Department of Transport

TOTAL SHIPPING UNITS
78

PLACARDS REQUIRED: *none*

DECLARED VALUE OF SHIPMENT

PLACARDS SUPPLIED?
 YES NO-FURNISHED BY CARRIER
 NAERG SUPPLIED?
 YES NO-FURNISHED BY CARRIER
 DRIVER'S SIGNATURE: _____

TOTAL WEIGHT

34,788 LB

Aventis
P.O. Box 12014
#2 T.W. Alexander Drive
Research Triangle Park, North Carolina 27709

C	AMOUNT
O	FEE
D	TOTAL

Date: *2-5-02*

Date: _____

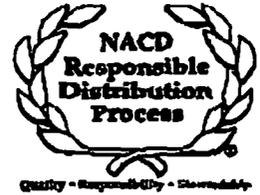
Shipper: *Audrey*

Carrier: *Monty Mooney*

Consignee: _____

2 SHIPPING LOCATION

AB0000012636



ORDER CONFIRMATION

DATE: 1-28-02

CUSTOMER: CEDAR CHEMICAL
ATTN: LISA

→ P.O. #: PLEASE ADVISE 02-011960

PRODUCT: FORMIC ACID 85%

QUANTITY: TRUCK LOAD OF DRUMS (545 #'S NET EACH DRUM)

DELIVERY DATE: THURS., 1-31-02 BEFORE 5 PM 2 PM

→ DELIVERY ADDRESS: PLEASE ADVISE 4A Phillips 311 Road
Helena AR 72342

COST: \$0.48/# DELV.

WIDMS

*Brandy.
Please do not ship until a 2/6 delivery*

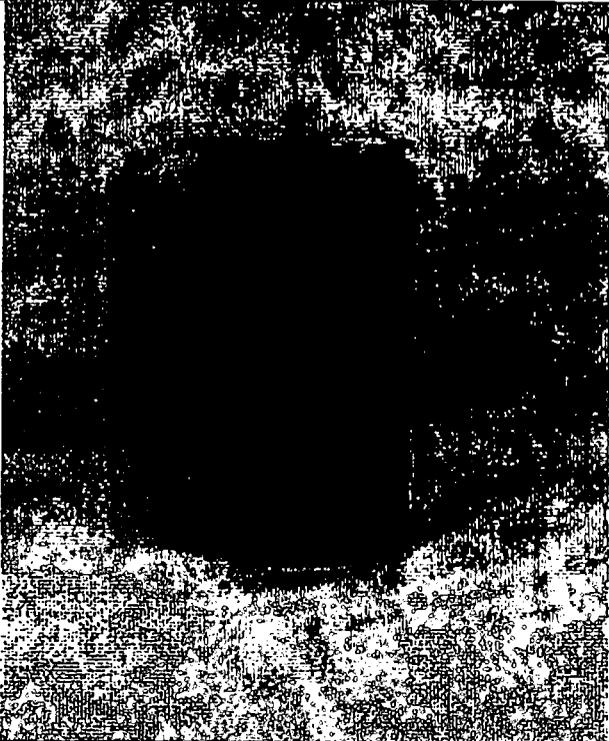
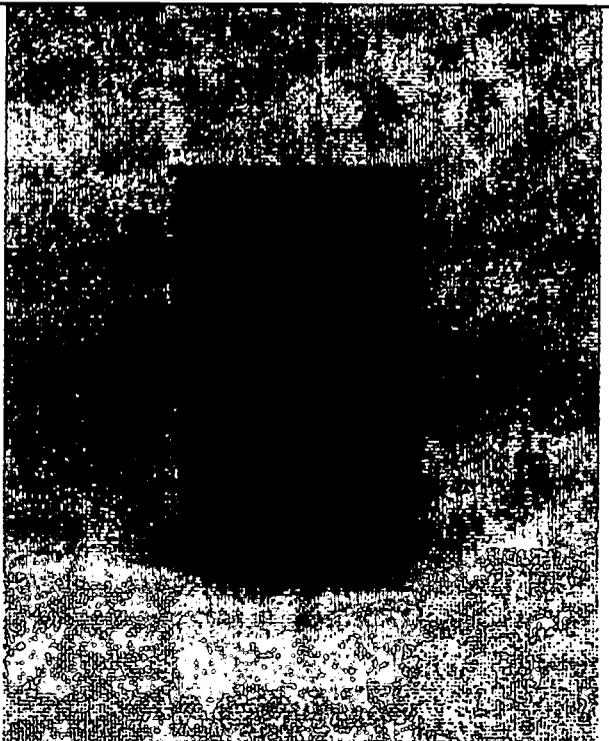
THANK YOU FOR THE ORDER!!!

*Lisa - Please call me
with the above info.*

*Thanks -
Brandi: 281-367-5898*

GREIF BROS. CORPORATION
INDUSTRIAL SHIPPING CONTAINER GROUP

LaPorte Product Comparison *Cyclanilide drum*

Convert From:	Convert To:
POH30	OS-30
	
<u>Technical Data</u>	<u>Technical Data</u>
Drum Height: 31.5"	Drum Height: 29.4"
Drum Diameter: 18.4"	Drum Diameter: 19.3"
Opening I.D. 15.5"	Opening I.D. 17.5"
Total Weight: 12.9 lbs	Total Weight: 14.6 lbs
Overflow Capacity: 31.2 gallons	Overflow Capacity: 32.2 gallons
Midpanel Height: 16.6"	Midpanel Height: 11.4"
Export Cubes: 6.69	Export Cubes: 6.94
Regulatory Information: X150	Regulatory Information: Y180 X125
	<p align="center"><u>Advantages</u></p> <ul style="list-style-type: none"> • Higher overflow capacity. • Lower center of gravity for easier handling. • Industry standard dimensions for replacement of components. • Produced in this specification at two different locations.

ICTU240190-3

degussa.

Fine Chemicals

Degussa AG - Werk Lilsdorf - D-53859 Niederkassel

Zentrale Analytik Lilsdorf
D-53859 Niederkassel
Telephone: 02208 / 69-242
FAX: 02208 / 69-402
2001-12-10

FAX-No. : 02366494934

Creanova Inc.

220 Davidson Avenue
08873 Somerset N.J USA

Post-It* Fax Note 7871		Date 1/17/02	# of pages 3
To LISA	From LEE E.		
Co./Dept. CEDAR CHEM.	Co. DEGUSSA		
Phone # 870-672-3795	Phone #		
Fax # CGE A FOR	Fax #		

Your order No 6284870

Purchase order No.: 30441925
Delivery No.: 0040910048000010
Lot-No.: 11210T2
Quantity: 20000 KG

01017210-1013254-1/1

Certificate of Analysis

Product: **SODIUM METHYLATE SOLUTION 30%**

property	method	specification values	unit	value
Total alkalinity as NaOCH3	SOP 0827 [titrimetry]	29,5 - 31,0	mass-%	30,4
Total content of NaOH and Na2CO3	SOP 0868 [Karl Fischer titration]	<= 0,5	mass-%	< 0,1
Effective content sodium methylate	SOP 0827/868 [titrimetry]	29,5 - 30,5	mass-%	30,3

With these results of our inspections we certify that the material described above complies with the terms of the contract order

Degussa AG
Fine Chemicals

signed Gr. Partner
Quality Inspection Manager

This certificate has been prepared with care and to the best of our knowledge as part of the quality assurance system of Degussa AG. It is provided to our customers for information purposes only and does not relieve from obligation to perform proper incoming inspections upon receipt of the product. Furthermore, it is solely the customer's responsibility to determine the suitability of the product for its intended use. Degussa AG warrants that the product described herein fully meets its sales specification.

® a registered trademark of the Degussa AG

Certificate of Analysis machine-made; valid without signature

Page 1
End

Form-DEGUSSA

12:88
AB0000012636

BVIU424045-2

degussa.

Fine Chemicals

Degussa AG - Werk Lütendorf - D-53858 Niederkassel

Zentrale Analytik Lütendorf
 D-53858 Niederkassel
 Telephone : 02208 / 69-242
 FAX : 02208 / 69-402
 2001-12-10

FAX-No. : 02386494934

Cranova Inc.

220 Davidson Avenue
 08873 Somerset N.J USA

Your order No. 6284890

Purchase order No. 30441927
 Delivery No. 0040510368000010
 Lot-No. 11210T3
 Quantity 20000 KG

01017224-1013255-1/1

Certificate of Analysis

Product: **SODIUM METHYLATE SOLUTION 30%**

property	method	specification values	unit	value
Total alkalinity as NaOCH ₃	SOP 0827 (Titrimetry)	29,5 - 31,0	mass- %	30,4
Total content of NaOH and Na ₂ CO ₃	SOP 0888 (Karl Fischer titration)	<= 0,5	mass- %	< 0,1
Effective content sodium methylate	SOP 0827/888 (titrimetry)	29,5 - 30,5	mass- %	30,3

With these results of our inspections we certify that the material described above complies with the terms of the contract order.

Degussa AG
 Fine Chemicals

signed Dr. Portner
 Quality Inspection Manager

This certificate has been prepared with care and to the best of our knowledge as part of the quality assurance system of Degussa AG. It is provided to our customers for information purposes only and does not relieve from obligation to perform proper incoming inspections upon receipt of the product. Furthermore, it is solely the customer's responsibility to determine the suitability of the product for its intended use. Degussa AG warrants that the product described herein fully meets its sales specification. © a registered trademark of the Degussa AG

Certificate of Analysis machine-made; valid without signature.

Degussa Order # 6202220
 Customer PO # 646888/40
 Resource # 4103250
 EXFU 380011-5

T-828 P.01/01 F-612

degussa.

Fine Chemicals

Degussa AG - Werk Lisdorf - D-53859 Niederkassel

Zentrale Analytik Lisdorf
 D-53859 Niederkassel
 Telephone : 02208 / 69-242
 FAX : 02208 / 69-402
 2001-12-11

FAX-No. . 02386494934

Creanova Inc.

220 Davidson Avenue
 08873 Somerset N.J USA

Your order No. : 6202220

Purchase order No. : 80420089
 Delivery No. : 0040603208000010
 Lot-No. : 11211T1
 Quantity : 20000 KG

Q1016465-1013294-1 / 1

Certificate of Analysis

Product: **SODIUM METHYLATE SOLUTION 30%**

property	method	specification values	unit	value
Total alkalinity as NaOCH ₃	SOP 0827 [titrimetry]	29,5 - 31,0	mass- %	30,3
Total content of NaOH and Na ₂ CO ₃	SOP 0868 [Karl Fischer titration]	<= 0,5	mass- %	0,1
Effective content sodium methylate	SOP 0827/868 [titrimetry]	29,5 - 30,5	mass- %	30,2

With these results of our inspections we certify that the material described above complies with the terms of the contract order.

Degussa AG
 Fine Chemicals

signed Dr. Partner
 Quality Inspection Manager

This certificate has been prepared with care and to the best of our knowledge as part of the quality assurance system of Degussa AG. It is provided to our customers for information purposes only and does not relieve from obligation to perform proper incoming inspections upon receipt of the product. Furthermore, it is solely the customer's responsibility to determine the suitability of the product for its intended use. Degussa AG warrants that the product described herein fully meets its sales specification.

® is a registered trademark of the Degussa AG

Certificate of Analysis machine-made; valid without signature.

Page 1
 End

RAW MATERIAL RECEIVING RECORD

No 19883

CEDAR CHEMICAL 9000-1 REV: C

TIME IN AT GATE <i>1200</i>	SECTION 1	RECEIVED BY <i>Ok</i>
--------------------------------	-----------	--------------------------

DATE	ORDER NO.	CAR OR TRUCK NO.	DECLARED WEIGHT
------	-----------	------------------	-----------------

<i>1/16/02</i>	<i>Qventis</i>	<i>FCTU240190-3</i>	Net <i>19700 KGS</i>
----------------	----------------	---------------------	----------------------

SHIPPER <i>Qventis</i>	CARRIER <i>Rogers</i>
---------------------------	--------------------------

QUANTITY	CONTAINER	DESTINATION	RAW MAT CODE #	DESCRIPTION
<i>1</i>	<i>S/C</i>	<i>unit 5</i>	<i>NA</i>	<i>Sodium methoxide</i>

COMMENTS
no COFA OK to enter per David Parkey

SECTION 2

RECIPIENT	TIME SAMPLE/CERTIFICATE TAKEN TO LAB
-----------	--------------------------------------

<i>Blake Johnston</i>	<i>NA</i>
-----------------------	-----------

UNLOADED AT (tank number, unit, warehouse, etc.)
T-5213

COMMENTS
No COFA OK'd to unload By D. Parkey

SECTION 3

LAB TECHNICIAN	ACCEPT	REJECT	REASON FOR REJECTION
----------------	--------	--------	----------------------

--	--	--	--

COMMENTS

SECTION 4

SHIFT SUPERVISOR	ACCEPT	REJECT	REASON FOR REJECTION
------------------	--------	--------	----------------------

<i>ASims</i>	<i>X</i>		
--------------	----------	--	--

PLANT WEIGHT	UNLOADING TIMES	
NET <i>43820</i>	START TIME	END TIME

COMMENTS

TABY America Delivery Confirmation

This confirmation must be filled out completely and faxed back to TABY within 48hrs of delivery. The signature of a plant rep. confirming arrival/departure times and heel confirmation must be obtained. Failure to do so may result in delay/refusal of extra charges. If you have any questions regarding this delivery please contact TABY immediately.

TANK # : ICTU 240190-3	TABY REF # : 42.2365
PLANT : CEDAR CHEMICAL	PRODUCT: SODIUM METHYLATE SOLUTION
DELIVERY DATE : 1/16/02	APPOINTMENT TIME : 8:00 AM
Arrival Time :	Departure Time :
Reason for delay :	Tank contains heel :
	___ Yes ___ No
	Aprx. heel amount _____ gal.
Truck Detention (if applicable) :	Hrs
Name of Driver (please print) :	Signature of driver :
Name of plant rep. (please print)	Signature of plant rep :

WEIGHED ON A FAIRBANKS SCALE

DATE 1-16-02

CUSTOMERS NAME Cedar chemical

ADDRESS _____

COMMODITY Solain methoide

CARRIER Quintis

REMARKS _____

77600 12:01PM JA 16 02

LBS. GROSS

LBS. TARE - DRIVER ON _____ OFF _____

LBS. NET @ _____ PER LB. PRICE _____

33780 04:10PM JA 16 02

SHIPPER _____

43820
FAIRBANKS SCALE CAT. 083908

WEIGHER _____

FAIRBANKS SCALES INC. 1-800-221-3322

PICKSLIP

January 16, 2002

Delivery: 80124781
Del. Created By: Craig Dodson
Route: 000032

Requested Date: January 18, 2002
Carrier: ROUTING GUIDE
Freight Charges: Prepaid

SHIP-TO: USC1
 AVENTIS CROPSCIENCE USA LP
 C/O COASTLAND WAREHOUSE COMPAN
 125 COLEMAN BLVD PORT AUTHORIT
 SAVANNAH GA 31408
 USA

SHIP-FROM: USD7
 Aventis CropScience
 c/o Cedar Chemical Corporation
 49 Phillips Road #311
 Helena AR 72342
 USA

Item	Material	Description	Quantity	UOM	Quantity picked	Weight	UOM
000001	120511	CYCLANILIDE DRMP 1X50KG US (PRODUCED) CHEMICALS, N.O.I.	130	DRM		16900	LB

Order#: 714274

Order Taken By: Craig Dodson

Picked by: _____

Total Shipping units: _____

Gross Weight 16900 LB

RAW MATERIAL RECEIVING RECORD

No 19827

CEDAR CHEMICAL 9000-1 REV: C

TIME IN AT GATE

0910

RECEIVED BY

OW

SECTION 1

DATE: 1/4/02 ORDER NO: adientis CAR OR TRUCK NO: EXFU 380 265-3 DECLARED WEIGHT: Net 43870

SHIPPER: adientis CARRIER: Chick Deaux

QUANTITY	CONTAINER	DESTINATION	RAW MAT CODE #	DESCRIPTION
1	8/c	unit 5	NA	sodium methylate

COMMENTS: driver had C of A

SECTION 2

RECIPIENT: M. Thomas TIME SAMPLE/CERTIFICATE TAKEN TO LAB: 0945

UNLOADED AT (tank number, unit, warehouse, etc.): F5213 UNIT 5

COMMENTS:

SECTION 3

LAB TECHNICIAN: PF ACCEPT: V REJECT: REASON FOR REJECTION:

COMMENTS: COA. 29.9% ~~accept~~ per G.S., nothing to tie coa to lab

SECTION 4

SHIFT SUPERVISOR: ACCEPT: REJECT: REASON FOR REJECTION:

PLANT WEIGHT: NET 43,980 UNLOADING TIMES: START TIME: 0910 END TIME: 15:55

COMMENTS:

degussa.

WEIGHT TICKET

CARRIER *CKSW*
TLR./CAR NO. *ENFU 380265*
PRODUCT *Sodium methy late*
PLANT *Creanova*
B/L NO. *0363305901*
F/C NO.
RELEASE NO.

GROSS *79,380* *1/3/02*
TARE *35,510*
NET *43,870*

◀ START HERE *DB*
WEIGHED BY _____
CALL IN DATE: _____
ACTUAL ARRIVAL DATE: _____

WEIGHED ON A FAIRBANKS SCALE

DATE _____

CUSTOMERS NAME _____

ADDRESS _____

COMMODITY Sodium methyate

CARRIER _____

REMARKS

MB

79360 09:10AM JA 04 02

LBS. GROSS _____

LBS. TARE - DRIVER ON _____ OFF _____

LBS. NET @ _____ PER LB. PRICE _____

35380 03:55PM JA 04 02

43,980

SHIPPER _____

WEIGHER _____

FAIRBANKS SCALE CAT. 083905

degussa.

BILL OF LADING

Shipper's B/L No.

0363305901

Straight Bill of Lading - Short Form - ORIGINAL - NOT NEGOTIABLE
Reserved Subject to the classification and tariffs in effect on the date of the issue of this Bill of Lading

ORDER NO. 6330590	REL.	CONTRACT NO.	CUSTOMER P O NO. VERBAL-LISA WALKER	ORIGINAL
CEDAR CHEMICAL CORPORATION 49 PHILLIPS ROAD #311 HELENA, AR 72342			C.O.D SHIPMENT C O D Amt _____ Collection Fee _____ Total Charges _____	CHECK BOX INDICATING HOW CHARGES ARE TO BE PAID <input checked="" type="checkbox"/> PREPAID <input type="checkbox"/> COLLECT

The property described below in apparent good order except as noted (contents and conditions of packages unknown) marked consigned and delivered to indicated carrier (the word carrier being understood throughout this contract as meaning any person or corporation in possession of the property under the contract) agree to carry to the usual place of delivery of said description if on its route otherwise to deliver to another carrier on the route to said destination and it is mutually agreed as to each carrier of all or any of said property over all or any portion of said route to destination and as to each party at any time interested in all or any of said property that every service to be performed hereunder shall be subject to all the terms and conditions of the Uniform Domestic Freight Bill of Lading set forth (1) in Uniform Freight Classification in effect on the date hereof if this is a rail or a rail water shipment or (2) in the applicable motor carrier classification or tariff if this is a motor carrier shipment.

Shipper hereby certifies that he is familiar with all the terms and conditions of the said bill of lading (including those on the back thereof set forth in the classification or tariff) which governs the transportation of his shipment and the said terms and conditions are hereby agreed to by the shipper and accepted for himself and his agents.

NOTE: Where the rate is dependent on value the agreed or declared value of the property is hereby specifically stated to be not exceeding _____ 220 cents or _____ per pound for each distribution package.

The paper bags used in this shipment conform to the specifications for paper bags set forth in section 10 (c) of the uniform freight classification.

The fibre boxes and/or drums used for this shipment conform to the specifications set forth in the box maker's certificate thereon and all other requirements of the Uniform Freight Classification.

CARRIER NOTE
IF DELAYED IN TRANSIT
SHIPPER MUST BE ADVISED IMMEDIATELY

Shipped From: 03	THEODORE AL - MOBILE PLAN	SCAC CHIK	CARRIER NAME CHICKASAW CONT SER	DATE SHIPPED 1/03/02
			TRUCK/CAR NO EXFU380265	IN CALLS EMERGENCIES CALL CHEMTREC 800-424-9300

No and Kind of Pkgs.	PKM	Description of Article Special Marks and Exceptions	GROSS WEIGHT (Sub to Coy)	Class of Rate	Remarks
1 BULK TRUCK	X	SODIUM METHYLATE SOLUTIONS, 3, (8), UN 1289, III, ERG-132 **** DELIVER JAN. 04, 2002 @ 09:00 AM ***** *** (PER LISA WALKER) C OF A WITH SHIPMENT *** USE TANK # EXFU 380265 LOT # 1100072 43870 LBS. NO DETENTION TIME DO NOT BREAK DOWN PALLETS C OF A TENDERED TO DRIVER: ERG & PLACARDS OFFERED: NUMBER OF PALLETS: _____ *DELIVERY DATE: 1/04/02 PALLETS WEIGHT: _____	79380	99	Subject to section 7 of conditions of applicable bill of lading if this shipment is to be delivered to the consignee without recourse on the consignee the shipper shall sign the following statement: The Carrier shall not make delivery of this shipment without payment of freight and all other lawful charges. DEGUSSA CORP. (Signature of consignee) Rate \$ _____ to _____ apply in payment of the charges on the property described herein. Agent or Cashier Per _____ (The signature here Acknowledges only the Amount prepaid) Charges Advanced \$ _____ *If the shipment moves between two ports by a carrier by water the bill of lading shall state whether it is "tendered" or "shipper's weight" This tank car is blanketed with an inert gas <input type="checkbox"/> YES <input type="checkbox"/> NO *We hereby certify tank was loaded to full shell gallowage capacity This shipment is correctly described Current Weight is 79380 LB Subject to Verification by the Weighing and Inspection Bureau According to Agreement *Shipper's invoice or bill of lading not a part of bill of lading approved by the Interstate Commerce Commission

Shipper Permanent Address:
DEGUSSA CORP.
P.O. BOX 677
PARSIPPANY, NJ 07054-0677

*This is to certify that the above named materials are properly classified, described, packaged, marked and labeled and are in proper condition for transportation according to the applicable regulations of the department of transportation.

ATTENTION CARRIER ** PREPAID ONLY**
for payment attach bill of lading to freight bill and send to:
DEGUSSA CORP. c/o FTS PAYMENT PLAN
P.O. BOX 1259, SOMERVILLE, NEW JERSEY 08876-1259
Payment inquiry (908) 526-3824

Per JOHN M. RHODES
Shipping Supervisor

Carrier: CHICKASAW CONT SERV

AB0000012636

RAW MATERIAL RECEIVING RECORD

No 19828

CEDAR CHEMICAL 9000-1 REV: C

TIME IN AT GATE
10:50

RECEIVED BY
Dle

SECTION 1

DATE ORDER NO. CAR OR TRUCK NO. Net

11/4/02 N/A 1815 Net 34788

SHIPPER CARRIER
Qxenti Blackhawk

QUANTITY	CONTAINER	DESTINATION	RAW MAT CODE #	DESCRIPTION
78	drum	warehouse	NT	CDM

COMMENTS
no C of A required

SECTION 2

RECIPIENT TIME SAMPLE/CERTIFICATE TAKEN TO LAB

Berni Fazio 10:55

UNLOADED AT (tank number, unit, warehouse, etc.)

COMMENTS

SECTION 3

LAB TECHNICIAN ACCEPT REJECT REASON FOR REJECTION

COMMENTS

SECTION 4

SHIFT SUPERVISOR ACCEPT REJECT REASON FOR REJECTION

PLANT WEIGHT UNLOADING TIMES
NET START TIME END TIME

COMMENTS



SHIPPING ORDER

Must be legibly typed or, in ink, in indelible pencil, or in Carbon, and retained by the Agent

Received, subject to all terms and conditions of the contract in effect between shipper and Carrier on the date of issue of this Bill of Lading, the property described below in apparent good order, except as noted. In the event no contract is in effect, the Terms and Conditions of the Uniform Domestic Straight Bill of Lading as set forth in the appropriate rail or motor classification shall apply.

CONSIGNEE:

AVENTIS CROPSCIENCE USA
C/O CEDAR CHEMICAL CORPORATION
49 PHILLIPS RD #311
HELENA AR 72342
USA

CONSIGNOR (SHIPPER):

Aventis CropScience USA LLP
c/o Blackhawk Warehouse
407 Phillips 311 Road
Helena AR 72342
USA

B/L NO.

80123721

Page: 1 of 1

Date: January 04, 2002

CARRIER: ROUTING GUIDE *Blank***VEHICLE NO.:** 1815**FREIGHT CHARGES:** Prepaid**Carrier:** Attach memorandum copy of Bill of Lading to Freight Bill and send to

AVENTIS CROPSCIENCE C/O FTS
C/O FTS FREIGHT PAYMENT PLAN
P. O. BOX 1259
SOMERVILLE NJ 08876-1259

24 HOUR EMERGENCY TELEPHONE NUMBER:

1-800-424-9300

SEAL NOS. _____

QUANTITY	MATERIAL NO.	HM	DESCRIPTION	CLASS	ID	P.G.	NAERG	WEIGHT
15600 Kilograms	130277		CHEMICALS, N.O.I. CDM DRMP 1X200KG TO deliver Jan 4th. <i>78 drums - (1 drum - N 1-85g & K... drum - Shipped per Aventis) Kit # 01/97V = 78 dr.</i>					34,788 LB
<i>COA To be provided by Aventis</i>								

This is to certify that the above-named materials are properly classified, described, packaged, marked and labeled, and are in proper condition for transportation according to the applicable regulations of the Department of Transportation

TOTAL SHIPPING UNITS
78**PLACARDS REQUIRED:****DECLARED VALUE OF SHIPMENT**

PLACARDS SUPPLIED?
 YES NO-FURNISHED BY CARRIER
NAERG SUPPLIED?
 YES NO-FURNISHED BY CARRIER
 DRIVER'S SIGNATURE _____

TOTAL WEIGHT

34,788 LB

Aventis
P.O. Box 12014
#2 T.W. Alexander Drive
Research Triangle Park, North Carolina 27709

C	AMOUNT
O	FEE
D	TOTAL

Date: _____

Date: _____

Shipper: *W. M. ...*Carrier: *North ...*

Consignee: _____

3. CARRIER

AB0000012636

PURCHASE ORDER
 02-011787
 No.
 THIS NUMBER MUST APPEAR ON
 ALL INVOICES, PACKING SLIPS
 PACKAGES & CORRESPONDENCE

Acknowledge and Invoice to:
CEDAR CHEMICAL CORPORATION
 49 PHILLIPS RD. 311
 HELENA, AR 72342

DATE **L. WALKER**
 REQUISITIONER

BRENTAG MID-SOUTH, INC.
 SECTION 970
 LOUISVILLE, KY.

CEDAR CHEMICAL CORPORATION
 49 PHILLIPS RD 311
 HELENA, AR 72342

V
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40289

THIS OFFER TO PURCHASE IS MADE ONLY ON THE EXPRESS CONDITION THAT SELLER ACCEPTS ALL THE TERMS AND CONDITIONS ON THE REVERSE SIDE HEREOF AND ANY SUPPLEMENTAL CONDITIONS ATTACHED HERETO.

SHIP FROM	FOB S.P.	FREIGHT TERMS	PPDCOL	VENDOR NO. 02215	04
SHIP VIA BEST WAY	Required Delivery Date 8/20/60	PAYMENT TERMS NET 60 DAYS	TAX PERMIT NO.		

ITEM	QUANTITY	UNIT	INVENTORY NO.	DESCRIPTION	G. L. ACCOUNT NO.	UNIT PRICE
	REQ. NO. 6980 BY		L. WALKER		S 836 1460	
1	21,800	LBS	4	4-6240 FORMIC ACID SHIP FROM MEMPHIS, TN		.50 LBS
* * * C O N F I R M A T I O N * * *						
<p><i>Deliver 1-10 -</i> <i>Deliver 1/17</i> <i>40 drums</i></p>						

VENDOR COPY

BY: 
 AUTHORIZED SIGNATURE
PURCHASING MANAGER
 AB0000012636

RAW MATERIAL RECEIVING RECORD

No 20002

CEDAR CHEMICAL 9000-1 REV: C

TIME IN AT GATE
07:20

RECEIVED BY
MD

SECTION 1

DATE ORDER NO. CAR OR TRUCK NO. DECLARED WEIGHT

2-14-02 *AVENTIS* *984YD* Net *36960*

SHIPPER
AVENTIS

CARRIER
JACOBSON TRANS

QUANTITY	CONTAINER	DESTINATION	RAW MAT CODE #	DESCRIPTION
<i>64 Drums</i>	<i>B/H</i>	<i>warehouse</i>	<i>N/A</i>	<i>24-DCA</i>

COMMENTS
N/A

SECTION 2

RECIPIENT TIME SAMPLE/CERTIFICATE TAKEN TO LAB

Benni Ford

7:30

UNLOADED AT (tank number, unit, warehouse, etc.)

COMMENTS

SECTION 3

LAB TECHNICIAN ACCEPT REJECT REASON FOR REJECTION

PF

✓

COMMENTS
Anton approval.

SECTION 4

SHIFT SUPERVISOR ACCEPT REJECT REASON FOR REJECTION

PLANT WEIGHT

UNLOADING TIMES

NET

START TIME

END TIME

COMMENTS



SHIPPING ORDER

must be legibly filled in, in ink, in Indefinite Pencil, or in Carbon, and retained by the Agent

Received, subject to all terms and conditions of the contract in effect between shipper and Carrier on the date of issue of this Bill of Lading, the property described below in apparent good order, except as noted. In the event no contract is in effect, the Terms and Conditions of the Uniform Domestic Straight Bill of Lading as set forth in the appropriate rail or motor classification shall apply.

CONSIGNEE:

CONSIGNOR (SHIPPER):

B/L NO.

AVENTIS CROPSCIENCE USA
C/O CEDAR CHEMICAL CORPORATION
49 PHILLIPS RD #311
HELENA AR 72342
USA

Aventis CropScience USA LLP
c/o Wright Distribution Center
1000 Hanthorn Road
Lima OH 45804
USA

80126054
Page: 1 of 1
Date: February 08, 2002
VEHICLE NO.: JACOBSON TRANS
FREIGHT CHARGES: 98480
Prepaid

Carrier: Attach memorandum copy of Bill of Lading to Freight Bill and send to

24 HOUR EMERGENCY TELEPHONE NUMBER:
1-800-424-9300

SEAL NOS. 4247

AVENTIS CROPSCIENCE C/O FTS
C/O FTS FREIGHT PAYMENT PLAN
P. O. BOX 1259
SOMERVILLE NJ 08876-1259

QUANTITY	MATERIAL NO., HM	DESCRIPTION	CLASS	ID	P.G.	NAERG	WEIGHT
64 Drums	10967	X DICHLOROANILINE, SOLID MARINE POLLUTANT CHEMICALS, N.O.I. 2,4-DCA (2,4-DICHLOROANILINE) 1X250KG To deliver February 11th.	6.1 DRM	UN1590	11	153	36,960 LB

Bernie F. J.

This is to certify that the above-named materials are properly classified, described, packaged, marked and labeled, and are in proper condition for transportation according to the applicable regulations of the Department of Transportation

TOTAL SHIPPING UNITS
64

PLACARDS REQUIRED:

DECLARED VALUE OF SHIPMENT

PLACARDS SUPPLIED?
 YES NO-FURNISHED BY CARRIER
 MARK SUPPLIED?
 YES NO-FURNISHED BY CARRIER
 DRIVER'S SIGNATURE *[Signature]*

Aventis
P.O. Box 12014
62 T.W. Alexander Drive
Research Triangle Park, North Carolina 27709

TOTAL WEIGHT: 36,960 LB

C	AMOUNT
O	FEE
D	TOTAL

Shipper: *[Signature]*
3 - CARRIER

Date: _____
Carrier: *[Signature]* JTC

Date: _____
Consignee: _____

PURCHASE REQUISITION

Revision D



49 Phillips Road 311

Helena, Arkansas 72342

Phone: 870-572-3701 Fax: 870-572-3795

Website - www.cedarchem.com

PURCHASE ORDER NUMBER

01-111631

Terms: Net 30 Net 45 Net 60 Net 90 Other: _____

PURPOSE _____

ACCOUNT NO. 58361470

DATE 11-9-01

Item	Quantity	Unit	Description and Code	Price/Unit
	2800	EA	Drum Liners	162
			36 x 30 x 55	
			4 mil thick	
			Cyanuride	

Vendor Information: No. _____

Supplier pays Freight Cedar pays Freight Ship via _____

Name [Signature]

P.O. Box _____

Scheduled Delivery date _____ Freight / Tax \$ _____

Street Link Box

City SU 7267463

TOTAL REQUISITION AMOUNT \$

State 50A 945-5452

Submitted by [Signature]

Fax the Purchase Order to: _____

Approved by [Signature]

Fax No. _____

-----FOR INTERNAL USE ONLY-----

CEDAR WORK ORDER NO.

WAREHOUSE / UNIT DESIGNATION

CEDAR REQUISITION NO.

NO 2674

PURCHASE REQUISITION

Revision D



49 Phillips Road 311

Helena, Arkansas 72342

Phone: 870-572-3701 Fax: 870-572-3795

Website - www.cedarchem.com

PURCHASE ORDER NUMBER			
01-111687			
Terms: Net 30 <input type="radio"/>	Net 45 <input type="radio"/>	Net 60 <input checked="" type="radio"/>	Net 90 <input type="radio"/>
Other: _____			

PURPOSE _____ ACCOUNT NO. _____ DATE 11/13/01

Item	Quantity	Unit	Description and Code	Price/Unit
	15,160	#	41366 Xylene	.25
			Ship? From Memphis TN	
			1. @ 12/2 10mm	
			2. @ 12/11 10mm	
			3. 1/3 2pm - (2pm)	

Vendor Information; No. Supplier pays Freight Cedar pays Freight Ship via _____

Name LEW S. WANTS Scheduled Delivery date _____ Freight / Tax \$ _____

P.O. Box _____ Street _____

City _____ State _____ Zip _____

TOTAL REQUISITION AMOUNT \$

Fax the Purchase Order to: _____

Fax No. _____

Submitted by Yue

Approved by JH Rene

-----FOR INTERNAL USE ONLY-----

CEDAR WORK ORDER NO.	WAREHOUSE / UNIT DESIGNATION	CEDAR REQUISITION NO.
		No 2678

RAW MATERIAL RECEIVING RECORD

No 19762

CEDAR CHEMICAL FORM-1 REV: C

TIME IN AT GATE
07:50

RECEIVED BY
M.D.

SECTION 1

DATE	ORDER NO.	CAR OR TRUCK NO.	DECLARED WEIGHT
12-18-01	646888	PCVV 2550227	Net 43340

SHIPPER
Degussa

CARRIER
Chickasaw

QUANTITY	CONTAINER	DESTINATION	RAW MAT CODE #	DESCRIPTION
43340	T/T 90ACANT.	UNIT #5		Sodium Methylate

COMMENTS
C of A present

SECTION 2

RECIPIENT	TIME SAMPLE/CERTIFICATE TAKEN TO LAB
M. Thomas	0830

UNLOADED AT (tank number, unit, warehouse, etc.)
T-5213 UNIT 5

COMMENTS
\$B

SECTION 3

LAB TECHNICIAN	ACCEPT	REJECT	REASON FOR REJECTION
AD	✓		

COMMENTS

SECTION 4

SHIFT SUPERVISOR	ACCEPT	REJECT	REASON FOR REJECTION
[Signature]	✓		

PLANT WEIGHT	UNLOADING TIMES	
NET 43340	START TIME 0840	END TIME 1130

COMMENTS

WEIGHED ON A FAIRBANKS SCALE

DATE 12-12-07

CUSTOMERS NAME

Cedar Chair Contnrs Peru 255 022-1

ADDRESS

W. Helena Ave

COMMODITY

Sabin methoxide

CARRIER

Chickens Contnrs

REMARKS

79400 07:55AM DE 18 01

35960 11:24AM DE 18 01

43440

LBS. GROSS

LBS. TARE - DRIVER ON _____ OFF _____

LBS. NET @ _____ PER LB. PRICE _____

SHIPPER _____

WEIGHER _____

FAIRBANKS SCALE CAT. 083805

degussa.

BILL OF LADING

Shipper's B/L No.
0363119601

Straight Bill of Lading - Short Form - ORIGINAL - NOT NEGOTIABLE
Issued Subject to the classification and tariffs in effect on the date of the issue of this Bill of Lading

ORDER NO. 6311960	REL	CONTRACT NO.	CUSTOMER P O NO. 646888	ORIGINAL
CEDAR CHEMICAL CORPORATION 49 PHILLIPS ROAD #311 HELENA, AR 72342			C.O.D. SHIPMENT C O D Amt _____ Collection Fee _____ Total Charges _____	CHECK BOX INDICATING HOW CHARGES ARE TO BE PAID <input checked="" type="checkbox"/> PREPAID <input type="checkbox"/> COLLECT

The property described herein is placed and good order except as noted hereon and condition of contents of packages (unless otherwise marked) is guaranteed by the carrier (the word carrier being understood throughout this contract as meaning any person or corporation in possession of the property under the contract) agrees to carry to the usual place of delivery of said destination if on its route otherwise to deliver to another carrier on the route to said destination and it is mutually agreed as to each carrier of all or any of said property that all or any portion of said route to destination and on to each party of any loss interested in all or any of said property that every service to be performed hereon shall be subject to all the terms and conditions of the Uniform Domestic Straight Bill of Lading set forth (1) in the Uniform Freight Classification as shown on the date hereof if this is a rail or a rail water shipment or (2) in the applicable motor carrier classification or tariff if this is a motor carrier shipment.

Shipper hereby certifies that he is familiar with all the terms and conditions of the said bill of lading including those on the back thereof set forth in the classification or tariff which governs the transportation of his shipment and the said terms and conditions are hereby agreed to by the shipper and accepted for himself and his assigns.

NOTE: Where the rate is dependent on value the agreed or declared value of the property is hereby specifically stated to be not exceeding _____ 220 cents or _____ per pound for each distribution package.

The paper bags used in this shipment conform to the specifications for paper bags rule 4U section 10 (C) of the uniform freight classification.

*The fibre boxes and/or drums used for this shipment conform to the specifications set forth in the box makers certificate thereon and all other requirements of the Uniform Freight Classification.

CARRIER NOTE
IF DELAYED IN TRANSIT
SHIPPER MUST BE ADVISED IMMEDIATELY

Shipped From: 03	THEODORE AL - MOBILE PLAN	SCAC CHIK	CARRIER NAME CHICKASAW CONT SER	DATE SHIPPED 12/17/01
		TRUCK/CAR NO PCVU 255022-7	IN EMERGENCIES CALL CHEMTREC 800-424-9360	

No and Kind of Pkg.	QTY	Description of Articles Special Marks and Exceptions	GROSS WEIGHT (Sub to Car)	Class of Rate	Remarks	
1 BULK TRUCK		RQ, Sodium Methylate, Solution 3, UN1289, III	78540	99	<p>Subject to section 7 of conditions of applicable bill of lading if said shipment is to be delivered to the consignee without recourse on the occurrence of the cargo claim then the following statement:</p> <p>The Carrier shall not make delivery of this shipment without payment of freight and all other local charges.</p> <p>DEGUSSA CORP.</p> <p>(Signature of consignee)</p> <p>Rate \$ _____ to _____ apply in payment of the charges on the property described hereon.</p> <p>Agent or Cashier</p> <p>For</p> <p>(The signature here Acknowledges only the Amount prepaid)</p> <p>Charges Advanced</p> <p>*If the shipment moves between two ports by a carrier by water the law requires that the bill of lading shall state whether it is "gross" or "net" weight. This tank car is furnished with an inert gas.</p> <p><input type="checkbox"/> YES <input type="checkbox"/> NO</p> <p>"We hereby certify tank was loaded to full shell galleys capacity"</p> <p>This shipment is correctly classified (Gross Weight) is 78540 LB</p> <p>Subject to Verification by the Weighing and Inspection System According to Agreement</p> <p>*Shipper's imprint in lieu of stamp not a part of bill of lading approved by the Interstate Commerce Commission</p>	
43340		<p>DO NOT BREAK DOWN PALLETS C OF A TENDERED TO DRIVER: <i>EJ</i></p> <p>ERG & PLACARDS OFFERED: <i>EJ</i></p> <p>NUMBER OF PALLETS: _____ *DELIVERY DATE: 12/18/01</p> <p>PALLETS WEIGHT: _____</p>				

Shipper Permanent Address:
DEGUSSA CORP.
P.O. BOX 677
PARSIPPANY, NJ 07054-0677

This is to certify that the above named materials are properly classified, described, packaged, marked and labeled and are in proper condition for transportation according to the applicable regulations of the department of transportation.

ATTENTION CARRIER - PREPAID ONLY -
for payment attach bill of lading to freight bill and send to:
DEGUSSA CORP. c/o FTS PAYMENT PLAN
P.O. BOX 1259, SOMERVILLE, NEW JERSEY 08876-1259
Payment inquiry (908) 526-3824

For JOHN M. RHODES
Shipping Supervisor

Carrier: CHICKASAW CONT SERV

EJ

degussa.

DEGUSSA CORPORATION 379 INTERPACE PARKWAY P.O. BOX 677 PARSEPPANY, NJ 07054-0677 (973) 541-8000

PACKING LIST

Shipper's B/L No.

0363119601

ORDER NO. 6311960	REL	DATE RECD 121301	CONTRACT NO.	CUSTOMER P O NO. 646888	PO DATE	PAGE 1
-----------------------------	-----	----------------------------	--------------	-----------------------------------	---------	------------------

SHIP TO CEDAR CHEMICAL CORPORATION 49 PHILLIPS ROAD #311 HELENA, AR 72342	COD AMOUNT	FOB 1 - Ship Point 2 - Destination 3 - Ship Pt For Allowed 4 - Ship Pt For Eq 5 - Other (see below) STATUS 1 - Complete 2 - Partial ESTRAT A - Actual E - Estimated FOB: P2
	IF A PARTIAL SHIPMENT CALL SALES ORDER DEPT FOR NEW C.O.D AMOUNT *****	
SHIP TO AVENTIS CROPS SCIENCES USA LP PO BOX 13985 RESEARCH TRIANGLE PARK, NC 27		

SHIPPING POINT NO & NAME 03	THEODORE AL - MOBILE PLAN	NUMBER CHIK	CARRIER NAME CHICKASAW CONT SER	DATE SHIPPED 12/17/01
---------------------------------------	---------------------------	-----------------------	---	---------------------------------

ROUTING INSTRUCTIONS	TRUCK/CAR NO PCVU 255022-7	PREPAID/COLLECT PREPAID
----------------------	--------------------------------------	-----------------------------------

Item No.	Ordered Quantity	Unit of Measure	Packaged Form & Product Abbreviation	Shipped		Gross Weight
				No. Pieces	Quantity	
01 1	BULK TRUCK		410325000865 (LOT: 1090406) SODIUM METHYLATE 30% BULK	43340	43340	LB
**** DELIVER DEC. 18, 2001 @ 10:00 AM ****						

	43340	← TOTALS →		43340	43340	78540
--	-------	------------	--	-------	-------	-------

MANUFACTURING INSTRUCTIONS

PURCHASE REQUISITION

Revision D



49 Phillips Road 311

Helena, Arkansas 72342

Phone: 870-572-3701 Fax: 870-572-3795

Website - www.cedarchem.com

PURCHASE ORDER NUMBER

01-111664

Terms: Net 30 Net 45 Net 60 Net 90 Other: _____

PURPOSE _____ ACCOUNT NO. _____ DATE 11-13-11

Item	Quantity	Unit	Description and Code	Price/Unit
	32,700	#	4,2210 FUMIC ACID	.50
			Ship Full Memphis TN	
			1. 16 Drums 11.30	
			2. 26 Drums - later - 20 Drums 27 1/2	20
			3. 20 Drums - later 8 Drums 11	11
			33 Drums 1/3	1/3

Vendor Information: No.

Name Pharmacia

P.O. Box _____

Street _____

City _____

State _____ Zip _____

Supplier pays Freight Cedar pays Freight Ship via _____

Scheduled Delivery date _____ Freight / Tax \$ _____

TOTAL REQUISITION AMOUNT \$

Submitted by SW

Fax the Purchase Order to: _____

Fax No. _____

Approved by JHRone

FOR INTERNAL USE ONLY

CEDAR WORK ORDER NO.

WAREHOUSE / UNIT DESIGNATION

CEDAR REQUISITION NO.

NO 2677

RAW MATERIAL RECEIVING RECORD

No 19777

CEDAR CHEMICAL 9000-1 REV: C

TIME IN AT GATE
0940

RECEIVED BY
F. Clark

SECTION 1

DATE ORDER NO. CAR OR TRUCK NO. DECLARED WEIGHT

12/2/01 **NA** **7021** Net **NA**

SHIPPER: *B. Blackhawk* CARRIER: *B. Blackhawk*

QUANTITY	CONTAINER	DESTINATION	RAW MAT CODE #	DESCRIPTION
78 <i>200 Kg dis.</i>	<i>55 gal drum</i>	<i>warehouse</i>	NA	CDM

COMMENTS
mtc of A OK to enter per David Parker

SECTION 2

RECIPIENT TIME SAMPLE/CERTIFICATE TAKEN TO LAB

F. Clark

UNLOADED AT (tank number, unit, warehouse, etc.)

COMMENTS

SECTION 3

LAB TECHNICIAN ACCEPT REJECT REASON FOR REJECTION

COMMENTS

SECTION 4

SHIFT SUPERVISOR ACCEPT REJECT REASON FOR REJECTION

PLANT WEIGHT	UNLOADING TIMES	
NET 34.398	START TIME	END TIME

COMMENTS



SHIPPING ORDER

must be legibly filled in, in ink, in indelible pencil, or in Carbon, and retained by the Agent

Received, subject to all terms and conditions of the contract in effect between shipper and Carrier on the date of issue of this Bill of Lading, the property described below in apparent good or except as noted. In the event no contract is in effect, the Terms and Conditions of the Uniform Domestic Straight Bill of Lading as set forth in the appropriate rail or motor classification shall apply.

CONSIGNEE:

AVENTIS CROPSCIENCE USA
C/O CEDAR CHEMICAL CORPORATION
49 PHILLIPS RD #311
HELENA AR 72342
USA

CONSIGNOR (SHIPPER):

Aventis CropScience USA LLP
c/o Blackhawk Warehouse
407 Phillips 311 Road
Helena AR 72342
USA

B/L NO.

80123356

Page: 1 of 1

Date: December 21, 2001

CARRIER: ALT CARRIER

VEHICLE NO.: *Bmx 702*

FREIGHT CHARGES: Prepaid

Carrier: Attach memorandum copy of Bill of Lading to Freight Bill and s

AVENTIS CROPSCIENCE C/O FTS
C/O FTS FREIGHT PAYMENT PLAN
P. O. BOX 1259
SOMERVILLE NJ 08876-1259

24 HOUR EMERGENCY TELEPHONE NUMBER:

1-800-424-9300

SEAL NOS. _____

QUANTITY	MATERIAL NO.	HM	DESCRIPTION	CLASS	ID	P.G.	NAERG	WEIGHT
<i>15600</i> Kilograms <i>78ct</i>	130277		CHEMICALS, N.O.I. CDM DRMP 1X200KG <i>Lot - PN-NR2001/83V</i> <i>78 drums</i>					34,788 LB

This is to certify that the above-named materials are properly classified, described, packaged, marked and labeled, and are in proper condition for transportation according to the applicable regulations of the Department of Transport

TOTAL SHIPPING UNITS
78

PLACARDS REQUIRED: *none*

DECLARED VALUE OF SHIPMENT

PLACARDS SUPPLIED?
 YES NO-FURNISHED BY CARRIER
NAERG SUPPLIED?
 YES NO-FURNISHED BY CARRIER
 DRIVER'S SIGNATURE _____

TOTAL WEIGHT: 34,788 LB

Aventis
P.O. Box 12014
#2 T.W. Alexander Drive
Research Triangle Park, North Carolina 27709

C	AMOUNT
O	FEE
D	TOTAL

Date: *12/21/01*

Date: _____

Shipper: *Audrey*

Carrier: *Monty Moorey*

Consignee: *L. Clark*

AB0000012636

RAW MATERIAL RECEIVING RECORD

No 19936

CEDAR CHEMICAL 9000-1 REV: C

TIME IN AT GATE <i>08:50</i>	SECTION 1	RECEIVED BY <i>md</i>
---------------------------------	-----------	--------------------------

DATE	ORDER NO.	CAR OR TRUCK NO.	DECLARED WEIGHT
------	-----------	------------------	-----------------

<i>1-28-02</i>	<i>Aventis</i>	<i>01652</i>	Net <i>36960</i>
----------------	----------------	--------------	------------------

SHIPPER <i>Aventis</i>	CARRIER <i>JACOBSON TRANS.</i>
---------------------------	-----------------------------------

QUANTITY	CONTAINER	DESTINATION	RAW MAT CODE #	DESCRIPTION
<i>64 Drums</i>	<i>B/T</i>	<i>WAREHOUSE</i>	<i>N/A</i>	<i>214-DEA</i>

COMMENTS
NO COFA.

RECIPIENT	TIME SAMPLE/CERTIFICATE TAKEN TO LAB
-----------	--------------------------------------

<i>Benjamin</i>	<i>10:05</i>
-----------------	--------------

UNLOADED AT (tank number, shift, warehouse, etc.)

COMMENTS

SECTION 3			
LAB TECHNICIAN	ACCEPT	REJECT	REASON FOR REJECTION

--	--	--	--

COMMENTS

SECTION 4			
SHIFT SUPERVISOR	ACCEPT	REJECT	REASON FOR REJECTION

--	--	--	--

PLANT WEIGHT	UNLOADING TIMES		
NET	START TIME	END TIME	

COMMENTS

RAW MATERIAL RECEIVING RECORD

No 19924

CEDAR CHEMICAL 9000-1 REV: C

TIME IN AT GATE
09:40

RECEIVED BY
MO

SECTION 1

DATE: 1-25-02 ORDER NO.: AVENTIS CAR OR TRUCK NO.: 1816 DECLARED WEIGHT: Net 34788

SHIPPER
AVENTIS

CARRIER
BLACKHAWK

QUANTITY	CONTAINER	DESTINATION	RAW MAT CODE #	DESCRIPTION
34788	B/T	warehouse	NA	CDM

COMMENTS
NO COFA

SECTION 2

RECIPIENT: NA TIME SAMPLE/CERTIFICATE TAKEN TO LAB:

UNLOADED AT (tank number, unit, warehouse, etc.)

COMMENTS

SECTION 3

LAB TECHNICIAN: NA ACCEPT: REJECT: REASON FOR REJECTION:

COMMENTS

SECTION 4

SHIFT SUPERVISOR: SAUL ACCEPT: [checked] REJECT: REASON FOR REJECTION:

PLANT WEIGHT: NET 34788 UNLOADING TIMES: START TIME 9:40 END TIME

COMMENTS



SHIPPING ORDER

must be legibly filled in, in ink, in Indelible Pencil, or in Carbon, and retained by the Agent

Received, subject to all terms and conditions of the contract in effect between shipper and Carrier on the date of issue of this Bill of Lading, the property described below in apparent good order, except as noted. In the event no contract is in effect, the Terms and Conditions of the Uniform Domestic Straight Bill of Lading as set forth in the appropriate rail or motor classification shall apply.

CONSIGNEE:

AVENTIS CROPSCIENCE USA
C/O CEDAR CHEMICAL CORPORATION
49 PHILLIPS RD #311
HELENA AR 72342
USA

CONSIGNOR (SHIPPER):

Aventis CropScience USA LLP
c/o Blackhawk Warehouse
407 Phillips 311 Road
Helena AR 72342
USA

B/L NO.

30125191

Page: 1 of 1

Date: January 25, 2002

CARRIER: ALT CARRIER

VEHICLE NO.: *BMA1816*

FREIGHT CHARGES: Prepaid

Carrier: Attach memorandum copy of Bill of Lading to Freight Bill and send to

AVENTIS CROPSCIENCE C/O FTS
C/O FTS FREIGHT PAYMENT PLAN
P. O. BOX 1259
SOMERVILLE NJ 08876-1259

24 HOUR EMERGENCY TELEPHONE NUMBER:

1-800-424-9300

SEAL NOS.

QUANTITY	MATERIAL NO.	HM	DESCRIPTION	CLASS	ID	P.C.	NAERG	WEIGHT
15600 Kilograms <i>78dr</i>	130277		CHEMICALS, N.O.I. CDM DRMP 1X200KG To deliver Jan 25th. <i>Lot 2001/830 = 40 3810011 = 10 3810005 = 6 3810009 = 4 3810006 = 8 01/970 = 4 78dr</i>					34,788 LB

*John Walker
1/25/02*

This is to certify that the above-named materials are properly classified, described, packaged, marked and labeled, and are in proper condition for transportation according to the applicable regulations of the Department of Transportation

TOTAL SHIPPING UNITS
78

PLACARDS REQUIRED: *none*

DECLARED VALUE OF SHIPMENT

PLACARDS SUPPLIED?
 YES NO-FURNISHED BY CARRIER
NAERG SUPPLIED?
 YES NO-FURNISHED BY CARRIER
 DRIVER'S SIGNATURE _____

TOTAL WEIGHT

34,788 LB

Aventis
P.O. Box 12014
#2 T.W. Alexander Drive
Research Triangle Park, North Carolina 27709

C	AMOUNT
O	FEE
D	TOTAL

Date: *1-25-02*

Date: _____

Shipper: *Aud Mya*

Carrier: *Monty Mooney*

Consignee: _____

AB0000012636

RAW MATERIAL RECEIVING RECORD

No 19930

CEDAR CHEMICAL 9MM-1 REV: C

TIME IN AT GATE
10:40

RECEIVED BY
MO

SECTION 1

DATE ORDER NO. CAR OR TRUCK NO. DECLARED WEIGHT

1-26-02 AVENTIS BV504240452 Net 19,760 kg

SHIPPER: AVENTIS CARRIER: CULF STATE

QUANTITY	CONTAINER	DESTINATION	RAW MAT CODE #	DESCRIPTION
19,760 kg	T/T	UNIT #5	N/A	SODIUM METHYLATE

COMMENTS
C OF A IN lab.

SECTION 2

RECIPIENT TIME SAMPLE/CERTIFICATE TAKEN TO LAB

B. J. J.

UNLOADED AT (tank number, unit, warehouse, etc.)
T-5217 T-5213

COMMENTS

SECTION 3

LAB TECHNICIAN ACCEPT REJECT REASON FOR REJECTION

OT ✓

COMMENTS

SECTION 4

SHIFT SUPERVISOR ACCEPT REJECT REASON FOR REJECTION

H. S. ✓

PLANT WEIGHT UNLOADING TIMES

NET 43,540 START TIME END TIME

COMMENTS

WEIGHED ON A FAIRBANKS SCALE

DATE

1-26-02

CUSTOMER'S NAME

Cedar Chemical

ADDRESS

COMMODITY

Sodium methyloate

CARRIER

Aventis

REMARKS

LBS. GROSS

LBS. TARE - DRIVER ON

OFF

LBS. NET @

PER LB. PRICE

SHIPPER

WEIGHER

79580

10:39AM JA 26 02

36040

02:13PM JA 26 02

43540

FAIRBANKS SCALE CAT. 088908

FAIRBANKS SCALES INC. 1-800-671-6222

RAW MATERIAL RECEIVING RECORD

No 19871

CEDAR CHEMICAL 9000-1 REV: C

TIME IN AT GATE	SECTION 1	RECEIVED BY
-----------------	-----------	-------------

DATE	ORDER NO.	CAR OR TRUCK NO.	DECLARED WEIGHT
1-14-02	NA	1299	Net 34788

SHIPPER <i>AVENTIS</i>	CARRIER <i>Black Hawk</i>
---------------------------	------------------------------

QUANTITY	CONTAINER	DESTINATION	RAW MAT CODE #	DESCRIPTION
34788	B/T	warehouse	N/A	CDM Dimp
<i>78ds @ 200kg ea.</i>				

COMMENTS

NO COFA

SECTION 2

RECIPIENT	TIME SAMPLE/CERTIFICATE TAKEN TO LAB
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<i>Bennett</i>	1-14-02
----------------	---------

UNLOADED AT (tank number, unit, warehouse, etc.)

COMMENTS

SECTION 3

LAB TECHNICIAN	ACCEPT	REJECT	REASON FOR REJECTION
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COMMENTS

SECTION 4

SHIFT SUPERVISOR	ACCEPT	REJECT	REASON FOR REJECTION
------------------	--------	--------	----------------------

--	--	--	--

PLANT WEIGHT	UNLOADING TIMES	
NET <i>34.398</i>	START TIME	END TIME

COMMENTS

RAW MATERIAL RECEIVING RECORD

No 19897

CEDAR CHEMICAL 9MM-1 REV: C

TIME IN AT GATE
1035

RECEIVED BY
Dh

SECTION 1

DATE ORDER NO. CAR OR TRUCK NO. DECLARED WEIGHT

1/18/02 Aventis 994802 Net 36960

SHIPPER: Aventis CARRIER: Wright Distribution

QUANTITY	CONTAINER	DESTINATION	RAW MAT CODE #	DESCRIPTION
64 @ 250 Kgs ea.	drums	warehouse	NA	2,4 DCA

COMMENTS: no C of A required

SECTION 2

RECIPIENT TIME SAMPLE/CERTIFICATE TAKEN TO LAB

UNLOADED AT (tank number, unit, warehouse, etc.)

COMMENTS

SECTION 3

LAB TECHNICIAN ACCEPT REJECT REASON FOR REJECTION

COMMENTS

SECTION 4

SHIFT SUPERVISOR ACCEPT REJECT REASON FOR REJECTION

PLANT WEIGHT UNLOADING TIMES

NET 35.264 START TIME END TIME

COMMENTS/b5.



SHIPPING ORDER

must be legibly filled in, in ink, in indelible pencil, or in Carbon, and retained by the Agent

Received, subject to all terms and conditions of the contract in effect between shipper and Carrier on the date of issue of this Bill of Lading, the property described below in apparent good order, except as noted. In the event no contract is in effect, the Terms and Conditions of the Uniform Domestic Straight Bill of Lading as set forth in the appropriate rail or motor classification shall apply.

CONSIGNEE:

AVENTIS CROPSCIENCE USA
C/O CEDAR CHEMICAL CORPORATION
49 PHILLIPS RD #311
HELENA AR 72342
USA

CONSIGNOR (SHIPPER):

Aventis CropScience USA LLP
c/o Wright Distribution Center
1000 Hanthorn Road
Lima OH 45804
USA

B/L NO.

80124429

Page: 1 of 1

Date: January 16, 2002

CARRIER:

JACOBSON TRANS
WRIGHT TRANSPORT
994806
FREIGHT CHARGES: Prepaid

Carrier: Attach memorandum copy of Bill of Lading to Freight Bill and send

24 HOUR EMERGENCY TELEPHONE NUMBER:

1-800-424-9300

SEAL NOS.

4927

AVENTIS CROPSCIENCE C/O FTS
C/O FTS FREIGHT PAYMENT PLAN
P. O. BOX 1259
SOMERVILLE NJ 08876-1259

QUANTITY	MATERIAL NO. HM	DESCRIPTION	CLASS	ID	P.C.	NAERC	WEIGHT
64 Drums	109671	X DICHLOROANILINE, SOLID MARINE POLLUTANT CHEMICALS, N.O.I. 2,4-DCA (2,4-DICHLOROANILINE) 1X250KG To deliver January 21st (70-512-7011)	6.1 DRM	UN1590	II	153	36,960 LB

Blenn. Y. H. 2

This is to certify that the above-named materials are properly classified, described, packaged, marked and labeled, and are in proper condition for transportation according to the applicable regulations of the Department of Transport.

TOTAL SHIPPING UNITS
16

PLACARDS REQUIRED:
UN 1590

DECLARED VALUE OF SHIPMENT

PLACARDS SUPPLIED?
 YES NO-FURNISHED BY CARRIER

NAERG SUPPLIED?
 YES NO-FURNISHED BY CARRIER

DRIVER'S SIGNATURE: *[Signature]*

Aventis
P.O. Box 12014
#2 T.W. Alexander Drive
Research Triangle Park, North Carolina 27709

TOTAL WEIGHT
36,960 LB

C AMOUNT
O FEE
D TOTAL

Shipped: *[Signature]*
3 - CARRIER

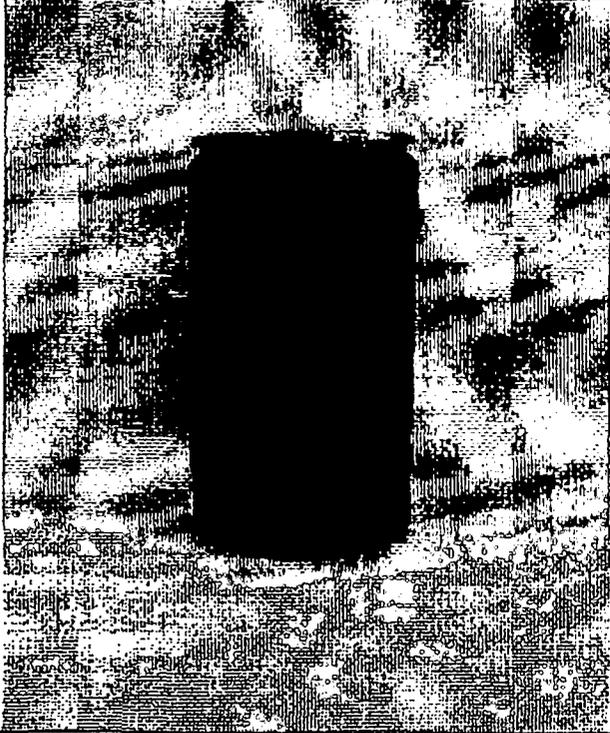
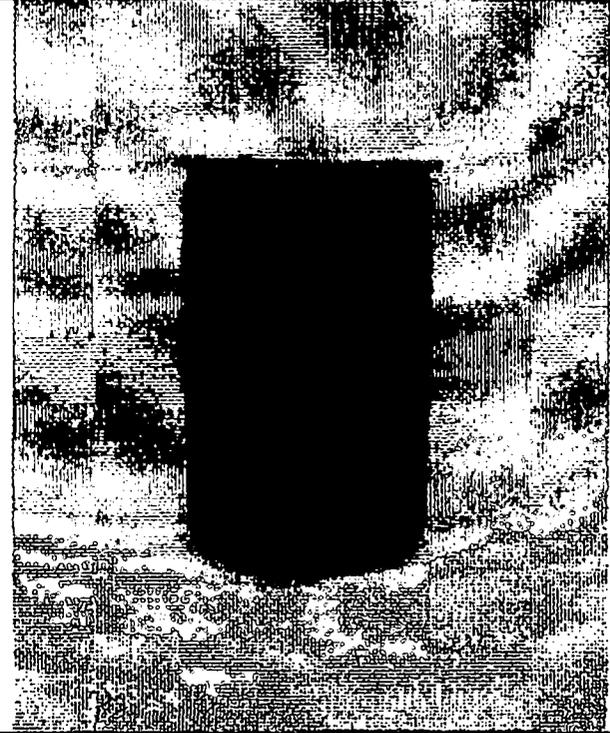
Date: *1-16-02*
Carrier: *[Signature]*

Date: _____
Consignee: _____

20100-L
AB0000012636

GREIF BROS. CORPORATION
INDUSTRIAL SHIPPING CONTAINER GROUP

LaPorte Product Comparison

Convert From:	Convert To:																																
POH30	OS-30																																
																																	
<p align="center"><u>Technical Data</u></p> <table border="1"> <tr> <td>Drum Height:</td> <td>31.5"</td> </tr> <tr> <td>Drum Diameter:</td> <td>18.4"</td> </tr> <tr> <td>Opening I.D.</td> <td>15.5"</td> </tr> <tr> <td>Total Weight:</td> <td>12.9 lbs</td> </tr> <tr> <td>Overflow Capacity:</td> <td>31.2 gallons</td> </tr> <tr> <td>Midpanel Height:</td> <td>16.6"</td> </tr> <tr> <td>Export Cubes:</td> <td>6.69</td> </tr> <tr> <td>Regulatory Information:</td> <td>X150</td> </tr> </table>	Drum Height:	31.5"	Drum Diameter:	18.4"	Opening I.D.	15.5"	Total Weight:	12.9 lbs	Overflow Capacity:	31.2 gallons	Midpanel Height:	16.6"	Export Cubes:	6.69	Regulatory Information:	X150	<p align="center"><u>Technical Data</u></p> <table border="1"> <tr> <td>Drum Height:</td> <td>29.4"</td> </tr> <tr> <td>Drum Diameter:</td> <td>19.3"</td> </tr> <tr> <td>Opening I.D.</td> <td>17.5"</td> </tr> <tr> <td>Total Weight:</td> <td>14.6 lbs</td> </tr> <tr> <td>Overflow Capacity:</td> <td>32.2 gallons</td> </tr> <tr> <td>Midpanel Height:</td> <td>11.4"</td> </tr> <tr> <td>Export Cubes:</td> <td>6.94</td> </tr> <tr> <td>Regulatory Information:</td> <td>Y180 X125</td> </tr> </table>	Drum Height:	29.4"	Drum Diameter:	19.3"	Opening I.D.	17.5"	Total Weight:	14.6 lbs	Overflow Capacity:	32.2 gallons	Midpanel Height:	11.4"	Export Cubes:	6.94	Regulatory Information:	Y180 X125
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Export Cubes:	6.94																																
Regulatory Information:	Y180 X125																																
	<p align="center"><u>Advantages</u></p> <ul style="list-style-type: none"> • Higher overflow capacity. • Lower center of gravity for easier handling. • Industry standard dimensions for replacement of components. • Produced in this specification at two different locations. 																																



SHIPPING ORDER

MUST BE LEGALLY REPRODUCED, OR REPRODUCED FROM, OR IN Carbon, and retained by the Agent

Received, subject to all terms and conditions of the contract in effect between shipper and Carrier on the date of issue of this Bill of Lading, the property described below in apparent good order, except as noted. In the event no contract is in effect, the Terms and Conditions of the Uniform Domestic Straight Bill of Lading as set forth in the appropriate rail or motor classification shall apply.

CONSIGNEE:

AVENTIS CROPSCIENCE USA
C/O CEDAR CHEMICAL CORPORATION
49 PHILLIPS RD #311
HELENA AR 72342
USA

CONSIGNOR (SHIPPER):

Aventis CropScience USA LLP
c/o Blackhawk Warehouse
407 Phillips 311 Road
Helena AR 72342
USA

B/L NO.

80124428

Page:1 of 1

Date: January 14, 2002

CARRIER: ALT CARRIER

VEHICLE NO.: 8Mx/27299

FREIGHT CHARGES: Prepaid

Carrier: Attach memorandum copy of Bill of Lading to Freight Bill and send to

AVENTIS CROPSCIENCE C/O FTS
C/O FTS FREIGHT PAYMENT PLAN
P. O. BOX 1259
SOMERVILLE NJ 08876-1259

24 HOUR EMERGENCY TELEPHONE NUMBER:

1-800-424-9300

SEAL NOS.

Blank seal number fields

Table with columns: QUANTITY, MATERIAL NO., HM, DESCRIPTION, CLASS, ID, P.G., NAERG, WEIGHT. Contains handwritten notes like '78 drums' and 'To deliver January 15th'.

This is to certify that the above-named materials are properly classified, described, packaged, marked and labeled, and are in proper condition for transportation according to the applicable regulations of the Department of Transportation

TOTAL SHIPPING UNITS: 78

PLACARDS REQUIRED: NONE

DECLARED VALUE OF SHIPMENT

PLACARDS SUPPLIED? YES/NO-FURNISHED BY CARRIER
NAERG SUPPLIED? YES/NO-FURNISHED BY CARRIER
DRIVER'S SIGNATURE

TOTAL WEIGHT

34,788 LB

Aventis
P.O. Box 12014
#2 T.W. Alexander Drive
Research Triangle Park, North Carolina 27709

C AMOUNT
O FEE
D TOTAL

Date: 1-14-02

Date:

Shipper: [Signature]

Carrier: [Signature]

Consignee:

2 - SHIPPING LOCATION

AB0000012636

Trish

From: "Chris McGee" <mcgee@cvrtmail.com>
To: "Trish" <trish@cvrtmail.com>
Cc: "Jim Rone" <jrone@cvrtmail.com>; "neil robbins" <nrobbins@cvrtmail.com>
Sent: Monday, February 05, 2001 10:46 AM
Subject: RE: Custom Invoicing

Trish,

47981 ✓ Please invoice Cymetech for \$225,000 per month until July or I communicate a different billing rate.

47983 ✓ Please invoice Zeneca at \$4.06/kg for production in 2001.

Please invoice Zeneca for \$214,998.5 for December. This is to cover the shortage for the year 2000.
(1000 MT - 904.446 MT) * \$2250/MT = \$214,998.50

47985 Thanks in Advance

Chris McGee

-----Original Message-----

From: Trish [mailto:trish@cvrtmail.com]
Sent: Wednesday, January 31, 2001 3:34 PM
To: Chris McGee
Cc: Jim Rone
Subject: Custom Invoicing

Chris,

It's that time again to invoice our customers for production. I will be invoicing Zeneca for Acifuorfen shipments at \$4.85 per kg and Cymetech for Telena production at \$215,000 for the month of January. Please let me know if these numbers are incorrect. If I don't hear from you, I will assume that they are agreeable.

Invoicing for Richman Chemical for Mace, and Aventis for Cyclanilide are a different story. I would usually get billing information from Dale. Neil asked me to get with you to find out what to do with these two accounts.

Let me know as soon as possible.

Thanks,

Trish

2/5/01

AB0000092113

Thursday, February 01, 2001

Acifluorfen Shipments for the Period From 1/1/01 To 1/31/01

Month - Year	# Date	B B/L	Lot	Cont#	Gross	Tare	Net	% Active	5120 100% AI	100% Kg
<i>January 2001</i>										
	1/18/01	20304351	ACI01115-01	SP1802	76,940	30,560	46,380	39.30%	18,227	8,268
	1/22/01	20304352	ACI01122-01	SP1054	77,980	30,800	47,180	40.40%	19,061	8,646
	1/23/01	20304354	ACI01123-01	SP2343	77,520	31,660	45,860	40.00%	18,344	8,321
	1/29/01	20306070	ACI01129-01	SP2264	74,600	29,320	45,280	39.40%	17,840	8,092
	1/30/01	20306071	ACI10030-01	SP2238	75,840	28,880	46,960	39.10%	18,361	8,329
Period Totals:					382,880	151,220	231,660	39.64%	91,834	41,656

#42523



REV. A

49 PHILLIPS RD. 311 • HELENA, AR 72342 • (870) 572-3701 • FAX (870) 572-3795

ACIPLUORFEN ACID
SODIUM SALT SOLUTION

CERTIFICATE OF ANALYSIS

Lot No.: ACI01115-01

Shipment Date: 1/15/01

Container No. : SP1802

B.O.L. No.: 20304351

<u>Properties</u>	<u>Specification</u>	<u>Results</u>
Strength	38-42 % w/w as Acifluorfen acid	: 39.3
R118118	max. 0.5 %	: ND
Isomer Ratio	max. 0.085	: 0.0762
Dinitro 1-3 impurities	max. 1.0 % (Sum of 3)	: 0.44
Trinitro impurities	max. 0.3 %	: 0.06
Acetate	max. 1.0 %	: 0.16
PCE	max. 100 ppm	: 35.9
Fluoride Ion	40 ppm Target	: 39.3
Ph	6.8-8.6	: 7.4
Iron	30 ppm Target	: 2.0

<u>Other Properties</u>	<u>Other Requirements</u>	<u>Results</u>
:		
:		
:		
:		
:		

1-15-01

Date

Troy Peppers

Quality Assurance

Straight Bill of Lading - Short Form
Original - Not Negotiable

This bill of lading is subject to the terms and conditions of the contract of carriage and the applicable laws and regulations. It is not a receipt for the goods and does not constitute a contract of carriage. It is subject to the terms and conditions of the contract of carriage and the applicable laws and regulations. It is not a receipt for the goods and does not constitute a contract of carriage. It is subject to the terms and conditions of the contract of carriage and the applicable laws and regulations. It is not a receipt for the goods and does not constitute a contract of carriage.

CARRIER/ROUTE: **MATLACK** DATE SHIPPED: **01/22/01** PAGE: **1 OF 1**

SHIP TO: **ZENECA AG PRODUCTS INC.
COLD CREEK PLANT
HIGHWAY 43
BUCKS, AL 36512**

TANK CAR DUTIAL/VEHICLE NO.: **SP1054**

SEAL NO. _____

FREIGHT CHARGES: FREIGHT PREPAID (Except when box at left is checked, check if charges are to be collected)

CUSTOMER PO No. **LOAD 345**

SHIPPER: **CEDAR CHEMICAL CORPORATION
HIGHWAY 242 SOUTH
WEST HELENA, AR 72390**

Forward Invoice for prepaid freight to: **ZENECA AG PRODUCTS INC.
COLD CREEK PLANT
PO BOX 32
BUCKS, AL 36572
ATTENTION: ACCOUNTS PAYABLE**

BL NO. MUST BE SHOWN ON EACH FREIGHT BILL

MASTER BL NUMBER: **20304352**

BL NUMBER: **20304352**

ORDER NO.: **45190446**

NO. PKGS.	HM	DESCRIPTION <small>The product names listed are trademarks of ZENEDA group companies</small>	NET QTY. UNITS	GROSS WEIGHT
1 TT		ACIFLUORFEN-SODIUM SALT SOLUTION NOT REGULATED BY DOT <i>TOP 17832 .17824 SEAL #17826 Bottom 17831</i> <i>Other 17830/17827</i> LOT# ACI 01122-01 PLEASE DELIVER TO ZENECA AT 0700 HRS ON 01/23/01	8648 A.K.	7798 Gross 30820 Tare 47180 Net <i>40. 8006</i>

TOTAL NO. OF PIECES: **1 TT** TOTAL GROSS WEIGHT (KG): _____ TOTAL GROSS WEIGHT (LBS): **77980**

REMARKS: SEND FREIGHT BILL TO: **ZENECA AG PRODUCTS INC.
COLD CREEK PLANT
PO BOX 32
BUCKS, AL 36572
ATTENTION: ACCOUNTS PAYABLE**

For help in chemical emergencies call **CHEMTREC 800-424-9300** day night

PLACARD REQUIREMENT: **NA**

PLACARDS SUPPLIED: YES OFFERED NO AFFIXED

K. Sins (SHIPPER) *Matlack* (CARRIER) DATE/TIME: **1-22-01**

Permanent post-office of shipper: 1800 Concord Pike, Wilmington DE 19807 23-0201 REV. 1998



REV. A

49 PHILLIPS RD. 311 • HELENA, AR 72342 • (870) 572-3701 • FAX (870) 572-3785

ACIFLUORFEN ACID
SODIUM SALT SOLUTION

CERTIFICATE OF ANALYSIS

Lot No.: ACI01122-01

Shipment Date: 01-22-01

Container No. : SP 1054

B.O.L. No.: 20304352

<u>Properties</u>	<u>Specification</u>	<u>Results</u>
Strength	38-42 % w/w as Acifluorfen acid	: 40.4
R118118	max. 0.5 %	: 0.1
Isomer Ratio	max. 0.085	: 0.0791
Dinitro 1-3 impurities	max. 1.0 % (Sum of 3)	: 0.6
Trinitro impurities	max. 0.3 %	: ND
Acetate	max. 1.0 %	: 0.2
PCE	max. 100 ppm	: 34.8
Fluoride Ion	40 ppm Target	: 41.8
Ph	6.8-8.6	: 7.2
Iron	30 ppm Target	: 1.0

<u>Other Properties</u>	<u>Other Requirements</u>	<u>Results</u>
: PLEASE NOTE MATERIAL DOES NOT MEET THE TARGET FOR FLUORIDE		
:		
:		
:		
:		

01-22-01
Date

John Hill
Quality Assurance

Straight Bill of Lading - Short Form
Original - Not Negotiable

Property described herein, in appropriate order, shall be used for identification and location of contents of package, container, vehicle, equipment, and contents in inland and ocean transit. It shall not be used for identification of contents in transit or for identification of contents in transit or for identification of contents in transit or for identification of contents in transit. It shall not be used for identification of contents in transit or for identification of contents in transit. It shall not be used for identification of contents in transit or for identification of contents in transit.

Shipper hereby certifies that he is the owner and holder of the title and right of lading in the goods described in this bill of lading and that the goods are in conformity with the description and quantity of the goods and that the goods are in conformity with the description and quantity of the goods and that the goods are in conformity with the description and quantity of the goods.

CARRIER/ROUTE: **MATLACK** DATE OF PREP: **01/23/01** PAGE: **1 OF 1**

SHIP TO:
ZENECA AG PRODUCTS INC.
COLD CREEK PLANT
HIGHWAY 43
BUCKS, AL 36512

TANK CAR INITIAL/VEHICLE NO. **SP 2343**

SEAL NO. _____
 FREIGHT CHARGES: FREIGHT PREPAID Except when box of left is checked (Check if charges are to be collected)

CUSTOMER PO No. **LOAD 346**

Signature of Consignor: _____

SHIPPER:
CEDAR CHEMICAL CORPORATION
HIGHWAY 242 SOUTH
WEST HELENA, AR 72390

Forward invoice for prepaid freight to:
ZENECA AG PRODUCTS INC.
COLD CREEK PLANT
PO BOX 32
BUCKS, AL 36572
ATTENTION: ACCOUNTS PAYABLE

BA NO. MUST BE SHOWN ON EACH FREIGHT BILL
 MASTER BA NUMBER **20304354**
 BA NUMBER **20304354**
 ORDER NO. **45190447**

NO. PKGS.	HM	DESCRIPTION <small>The product names listed are trademarks of ZENECA group companies</small>	NET QTY. UNITS	GROSS WEIGHT
1 TT		ACIFLUORPEN-SODIUM SALT SOLUTION NOT REGULATED BY DOT SEAL # <u>19260</u> <u>19273</u> <u>19270</u> <u>19276</u> LOT # <u>ACI-01123-01</u> PLEASE DELIVER TO ZENECA AT <u>0700</u> HRS ON <u>01/24/01</u>	<u>8321</u> AK	<u>77520</u> Gross <u>31660</u> Tare <u>45860</u> Net

TOTAL NO. OF PIECES: **1 TT** TOTAL GROSS WEIGHT (KG): _____ TOTAL GROSS WEIGHT (LBS): _____

REMARKS:
 SEND FREIGHT BILL TO: **ZENECA AG PRODUCTS INC.**
COLD CREEK PLANT
PO BOX 32
BUCKS, AL 36572
ATTENTION: ACCOUNTS PAYABLE

For help in chemical emergencies call
CHEMTREC
800-424-9300
 day night

I HEREBY DECLARE THAT THE CONTENTS OF THIS BILL OF LADING ARE FULLY AND ACCURATELY DESCRIBED ABOVE BY THE SHIPPER AND THAT THE GOODS ARE CLASSIFIED, PACKAGED, MARKED AND LABELED IN ACCORDANCE WITH ALL APPLICABLE REGULATIONS AND THAT THE SHIPPER IS RESPONSIBLE FOR THE PROPER CLASSIFICATION AND MARKING OF THE GOODS.

BY SIGNING THIS BILL OF LADING, CARRIER ASSUMES THE RESPONSIBILITY FOR THE PROTECTION AND SAFETY OF THE GOODS AND THE SHIPPER'S LIABILITY FOR HAZARDOUS MATERIALS IS LIMITED TO THE EXTENT OF THE CARRIER'S TARIFF AND/OR AGREEMENT.

PLACARD REQUIREMENT
 NA

PLACARDS SUPPLIED
 YES OFFERED
 NO AFFIXED

Shipper: Mark Mc Buide (SHIPPER) ZENECA Inc. Carrier: Cliff Dawson (CARRIER) DATE/TIME: 1-23-01 23:06
 Permanent post-office of shipper: 1800 Concord Pike, Wilmington DE 19897 302-6001 REG. 1004



REV. A

49 PHILLIPS RD. 311 • HELENA, AR 72342 • (870) 572-3701 • FAX (870) 572-3796

**ACIFLUORFEN ACID
SODIUM SALT SOLUTION**

CERTIFICATE OF ANALYSIS

Lot No.: ACI01123-01

Shipment Date: 01-23-2000

Container No. : SP2343

B.O.L. No.: 20304354

<u>Properties</u>	<u>Specification</u>	<u>Results</u>
Strength	38-42 % w/w as Acifluorfen acid	: 40.0
R118118	max. 0.5 %	: 0.13
Isomer Ratio	max. 0.085	: 0.0794
Dinitro 1-3 impurities	max. 1.0 % (Sum of 3)	: 0.70
Trinitro impurities	max. 0.3 %	: 0.10
Acetate	max. 1.0 %	: 0.10
PCE	max. 100 ppm	: 29.4
Fluoride Ion	40 ppm Target	: 24.4
Ph	6.8-8.6	: 7.30
Iron	30 ppm Target	: 2.00

<u>Other Properties</u>	<u>Other Requirements</u>	<u>Results</u>
:		
:		
:		
:		
:		

01-23-01
Date

Charles L. L...
Quality Assurance



REV. A

49 PHILLIPS RD. 311 • HELENA, AR 72342 • (870) 572-3701 • FAX (870) 572-3785

ACIFLUORFEN ACID
SODIUM SALT SOLUTION

CERTIFICATE OF ANALYSIS

Lot No.: ACI01129-01

Shipment Date: 01-29-2001

Container No. : SP2264

B.O.L. No.: 20306070

<u>Properties</u>	<u>Specification</u>	<u>Results</u>
Strength	38-42 % w/w as Acifluorfen acid	: 39.4
R118118	max. 0.5 %	: 0.18
Isomer Ratio	max. 0.085	: 0.0801
Dinitro 1-3 impurities	max. 1.0 % (Sum of 3)	: 0.81
Trinitro impurities	max. 0.3 %	: 0.08
Acetate	max. 1.0 %	: 0.10
FCE	max. 100 ppm	: 13.3
Fluoride Ion	40 ppm Target	: 38.0
Ph	6.8-8.6	: 7.10
Iron	30 ppm Target	: 2.00

<u>Other Properties</u>	<u>Other Requirements</u>	<u>Results</u>
:		
:		
:		
:		
:		

01-29-01
Date

Charlie [Signature]
Quality Assurance

Straight Bill of Lading - Short Form
Original - Not Negotiable

The property described herein is agreed to be carried, stored, received, packed and loaded at the expense of the shipper and shall be subject to the terms and conditions of the bill of lading and the bill of lading shall be subject to the terms and conditions of the bill of lading and the bill of lading shall be subject to the terms and conditions of the bill of lading.

CARRIER/ROUTE: **MATLACK** DATE SHIPPED: **01/30/01** PAGE: **1 OF 1**

SHIP TO:
ZENECA AG PRODUCTS INC.
COLD CREEK PLANT
HIGHWAY 43
BUCKS, AL 36512

TANK CAR INITIAL/VEHICLE NO. **SP2238**

SEAL NO. _____
 FREIGHT CHARGES: FREIGHT PREPAID (Except when box on left is checked (Check if charges are to be collected))
 Subject to Section 9 of conditions of applicable bill of lading, if this shipment is to be delivered to any consignee without payment on the bill of lading, the shipper shall sign the following permission. The carrier shall not be liable for the shipment without payment of freight and other lawful charges.
 Signature of Consignor: _____

CUSTOMER PO No. **LOAD 348**

Forward Invoice for prepaid freight to:
ZENECA AG PRODUCTS INC.
COLD CREEK PLANT
PO BOX 32
BUCKS, AL 36572
ATTENTION: ACCOUNTS PAYABLE

B/L NO. MUST BE SHOWN ON EACH FREIGHT BILL
 MASTER B/L NUMBER **20306071**
 B/L NUMBER **20306071**
 ORDER NO. **45192732**

SHIPPER:
CEDAR CHEMICAL CORPORATION
HIGHWAY 242 SOUTH
WEST HELENA, AR 72390

NO. PKG.	HM	DESCRIPTION The product names listed are trademarks of ZENECA group companies	NET QTY. UNITS	GROSS WEIGHT
1 TT		ACIFLUORFEN-SODIUM SALT SOLUTION NOT REGULATED BY DOT 17873 17874 17862 SEAL # 17865 17843 LOT # AC101130-01 17868 17866 17861 17864 17872 PLEASE DELIVER TO ZENECA AT 1300 HRS ON 1/31/01	8329 A.K.	75840 Gross 28880 Tare 46960 Net

TOTAL NO. OF PIECES: **1 TT** TOTAL GROSS WEIGHT (KG): _____ TOTAL GROSS WEIGHT (LBS): _____

REMARKS:
 SEND FREIGHT BILL TO: **ZENECA AG PRODUCTS INC.**
COLD CREEK PLANT
PO BOX 32
BUCKS, AL 36572
ATTENTION: ACCOUNTS PAYABLE

For help in chemical emergencies call
CHEMTREC
800-424-9300
 day night

I HEREBY DECLARE THAT THE CONTENTS OF THIS CONSIGNMENT ARE FULLY AND ACCURATELY DESCRIBED ABOVE BY THE PROPER SHIPPING NAME, AND ARE CLASSIFIED, PACKAGED, MARKED AND LABELLED/PLACARDED AND ARE IN ALL RESPECTS IN PROPER CONDITION FOR TRANSPORT ACCORDING TO APPLICABLE REGULATIONS AND/OR AGREEMENTS.

BY SIGNING THIS BILL OF LADING, CARRIER ASSUMES RESPONSIBILITY FOR THE PLACARDS AND EMERGENCY SUPPLIES FOR HAZARDOUS MATERIALS DESCRIBED.

PLACARD REQUIREMENT
 NA

PLACARDS SUPPLIED
 YES OFFERED
 NO AFFIXED

SHIPPER: *MacMillan* DATE/TIME: **1-30-01**
ZENECA Inc. Permanent post-office of shipper: 1800 Concord Pike, Wilmington DE 19897
 ZS-0801 REV. 10/94



REV. A

49 PHILLIPS RD. 311 • HELENA, AR 72342 • (870) 572-3701 • FAX (870) 572-3795

**ACIFLUORFEN ACID
SODIUM SALT SOLUTION**

CERTIFICATE OF ANALYSIS

Lot No.: ACI01130-01

Shipment Date: 01-30-2001

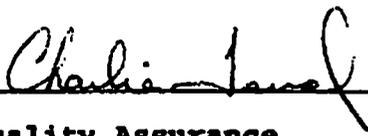
Container No. : SP2238

B.O.L. No.: 20306071

<u>Properties</u>	<u>Specification</u>	<u>Results</u>
Strength	38-42 % w/w as Acifluorfen acid	: 39.1
R118118	max. 0.5 %	: 0.14
Isomer Ratio	max. 0.085	: 0.0797
Dinitro 1-3 impurities	max. 1.0 % (Sum of 3)	: 0.46
Trinitro impurities	max. 0.3 %	: 0.08
Acetate	max. 1.0 %	: 0.16
PCE	max. 100 ppm	: 21.6
Fluoride Ion	40 ppm Target	: 45.6
Ph	6.8-8.6	: 7.30
Iron	30 ppm Target	: 1.00

<u>Other Properties</u>	<u>Other Requirements</u>	<u>Results</u>
:		
:		
:		
:		
:		

Date


Quality Assurance

PHONE: 901/685-5348

CEDAR CHEMICAL CORPORATION
SUITE 2414, 5100 POPLAR AVE.
MEMPHIS, TN 38137

I N V O I C E E D I T

2/07/01 47985 3/09/01

4257

ZENECA AGRICHEMICALS INC.
COLD CREEK PLANT
AG PRODUCTS
P. O. BOX 32
BUCKS AL 36512

4740-04

*** SHIPPED COMPLETE ***

ZENECA INC. AGRICHEMICALS
824 E. 12TH STREET
NORTH LITTLE ROCK AR 72115

04

CEDAR CHEMICAL CORPORATION
P.O. BOX 2900
DEPARTMENT 161
MEMPHIS, TN 38101-2900

0/00/00 4740-04 47985-000 AGREEMENT 8 C. MCGEE COLLECT

4 WEST HELENA PLANT

NET DUE 30 DAYS

5120 ACIFLUORFEN
C 3682 4300

kg 214,996.50

E
E
E
E

TO INVOICE YOU \$215,030.25 FOR CONTRACT SHORTFALL.
THIS IS TO COVER THE SHORTAGE FOR THE YEAR 2000.

(1,000 MT LESS 904.431 MT) X \$2,250/MT = \$215,030.25

PAY THIS AMOUNT

214,996.50

Trish

From: "Chris McGee" <mcgee@cvtmail.com>
To: "trish hunter" <trish@cvtmail.com>; "neil robbins" <nrobbins@cvtmail.com>
Sent: Thursday, February 08, 2001 10:38 AM
Subject: FW: Cedar invoices

-----Original Message-----

From: julian.gregory@syngenta.com [<mailto:julian.gregory@syngenta.com>]
Sent: Thursday, February 08, 2001 8:51 AM
To: david.fesperman@syngenta.com; robin.shubra@syngenta.com;
mcgee@cvtmail.com; glen.robinson@syngenta.com; julian.gregory@syngenta.com
Subject: Cedar invoices

Dave,

I will talk to Robin check if we have a problem with booking in the December invoice.

Also, I spoke with Chris McGee at Cedar last week, we confirmed to use the shipped volume as the basis for the 2000 shortfall, both our numbers were within a few kg's. Cold Creek reported shipped in 2000 904,431kg

Therefore, Cedar should invoice for contract shortfall for
 $(1000000-904431)*2.25 = \215030.25

Glen Robinson accrued for (at least some of) this so we need to ensure that we offset against that,

thanks Julian

2/8/01

AB0000092110

Trish

From: "Chris McGee" <mcgee@cvrtmail.com>
To: "Trish" <trish@cvrtmail.com>
Cc: "Jim Rone" <jrone@cvrtmail.com>; "neil robbins" <nrobbins@cvrtmail.com>
Sent: Monday, February 05, 2001 10:48 AM
Subject: RE: Custom Invoicing

Trish,

47981 ✓ Please invoice Cymetech for \$225,000 per month until July or I communicate a different billing rate.

47983 ✓ Please invoice Zenica at \$4.06/kg for production in 2001.

Please invoice Zenica for \$214,998.5 for December. This is to cover the shortage for the year 2000.
(1000 MT - 804.446 MT) * \$2250/MT = \$214,998.50

47985 Thanks in Advance

Chris McGee

-----Original Message-----

From: Trish [mailto:trish@cvrtmail.com]
Sent: Wednesday, January 31, 2001 3:34 PM
To: Chris McGee
Cc: Jim Rone
Subject: Custom Invoicing

Chris,

It's that time again to invoice our customers for production. I will be invoicing Zeneca for Acifuorfen shipments at \$4.85 per kg and Cymetech for Telene production at \$215,000 for the month of January. Please let me know if these numbers are incorrect. If I don't hear from you, I will assume that they are agreeable.

Invoicing for Richman Chemical for Mace, and Aventis for Cyclanilide are a different story. I would usually get billing information from Dale. Neil asked me to get with you to find out what to do with these two accounts.

Let me know as soon as possible.

Thanks,

Trish

2/5/01

AB0000092110

May 08, 2001

Delivery: 80096430
Del. Created By: Craig Dodson
Route: 000033

Requested Date: May 15, 2001
Carrier: ROUTING GUIDE
Freight Charges: Prepaid

SHIP-TO: USB7
AVENTIS CROPSCIENCE USA LP
% WRIGHT DISTRIBUTION CENTER I
1-75 EXIT 122
1000 HANTHORN RD
LIMA OH 45804
USA

SHIP-FROM: USD7
Aventis CropScience
c/o Cedar Chemical Corporation
49 Phillips Road #311
Helena AR 72342
USA

Item	Material	Description	Quantity	UOM	Quantity picked	Weight	UOM
000001	109671	2,4-DCA (2,4-DICHLOROANILINE)1X100KG DRM	72	DRM	_____	18720	LB
Order#: 710509		Order Taken By: Craig Dodson					

Picked by:

Total Shipping units:

Gross Weight 18720 LB
AB0000028806

May 08, 2001

Delivery: 80096429
Del. Created By: Craig Dodson
Route: 000033

Requested Date: May 14, 2001
Carrier: ROUTING GUIDE
Freight Charges: Prepaid

SHIP-TO: USB7
AVENTIS CROPSCIENCE USA LP
% WRIGHT DISTRIBUTION CENTER I
1-75 EXIT 122
1000 HANTHORN RD
LIMA OH 45804
USA

SHIP-FROM: USD7
Aventis CropScience
c/o Cedar Chemical Corporation
49 Phillips Road #311
Helena AR 72342
USA

Item	Material	Description	Quantity	UOM	Quantity picked	Weight	UOM
000001	109671	2,4-DCA (2,4-DICHLOROANILINE)1X100KG DRM	72	DRM	_____	18720	LB
		Order #: 710508	Order Taken By: Craig Dodson				

Picked by:

Total Shipping units:

Gross Weight 18720 LB
AB0000028806

May 08, 2001

Delivery: 80096431
Del. Created By: Craig Dodson
Route: 000033

Requested Date: May 16, 2001
Carrier: ROUTING GUIDE
Freight Charges: Prepaid

SHIP-TO: USB7
AVENTIS CROPSCIENCE USA LP
% WRIGHT DISTRIBUTION CENTER I
1-75 EXIT 122
1000 HANTHORN RD
LIMA OH 45804
USA

SHIP-FROM: USD7
Aventis CropScience
c/o Cedar Chemical Corporation
49 Phillips Road #311
Helena AR 72342
USA

Item	Material	Description	Quantity	UOM	Quantity picked	Weight	UOM
000001	109671	2,4-DCA (2,4-DICHLOROANILINE)1X100KG DRM	23	DRM		5980	LB
Order#: 710510		Order Taken By: Craig Dodson					

*72 Drums
31680 net
38000 GROSS*

*6 pellets -
1020
net
12500*

May 08, 2001

Delivery: 80096428
Del. Created By: Craig Dodson
Route: 000033

Requested Date: May 11, 2001
Carrier: ROUTING GUIDE
Freight Charges: Prepaid

SHIP-TO: US87
AVENTIS CROPSCIENCE USA LP
% WRIGHT DISTRIBUTION CENTER I
1-75 EXIT 122
1000 HANTHORN RD
LIMA OH 45804
USA

SHIP-FROM: USD7
Aventis CropScience
c/o Cedar Chemical Corporation
49 Phillips Road #311
Helena AR 72342
USA

Item	Material	Description	Quantity	UOM	Quantity picked	Weight	UOM
000001	109671	2,4-DCA (2,4-DICHLOROANILINE)1X100KG DRM	72	DRM		18720	LB
		Order#: 710507	Order Taken By: Craig Dodson				

Picked by:

Total Shipping units:

Gross Weight 18720 LB
AB0000028806

May 07, 2001

Delivery: 80096083
Del. Created By: Holly West
Route: 000032

Requested Date: May 07, 2001
Carrier: ROUTING GUIDE
Freight Charges: Prepaid

SHIP-TO: 21542
Aventis CropScience
c/o Steve Nutter
(919) 549-2069
1307 Person St
DURHAM NC 27703
USA

SHIP-FROM: USD7
Aventis CropScience USA LLP
c/o Cedar Chemical Corporation
49 Phillips Road #311
Helena AR 72342
USA

Item	Material	Description	Quantity	UOM	Quantity picked	Weight	UOM
000010	120511	CYCLANILIDE FDRM 1XB0KG US (PRODUCED)	1	DRM		130	LB
		Order #: 69758	Order Taken By: Holly West				
		Customer PO#: DODSON/NUTTER					

Please ship from one of the following lot numbers:
7811015, #7811016 or #7811018.

Ship 5/8
Am Frtwys

OK
w

May 08, 2001

Delivery: 80096435
Del. Created By: Craig Dodson
Route: 000033

Requested Date: May 14, 2001
Carrier: ROUTING GUIDE
Freight Charges: Prepaid

SHIP-TO: US82
AVENTIS CROPSCIENCE USA LP
133 E KRAUSS
ST LOUIS MO 63111
USA

SHIP-FROM: USD7
Aventis CropScience
c/o Cedar Chemical Corporation
49 Phillips Road #311
Helena AR 72342
USA

Item	Material	Description	Quantity	UOM	Quantity picked	Weight	UOM
000001	120511	CYCLANILIDE FDRM 1X50KG US (PRODUCED)	3	DRM	_____	390	LB
		Order#: 710511	Order Taken By: Craig Dodson				

Please choose 1 drum from either lot 7811006 or 7811009. Please choose
1 drum from either lot 7811013 or 7811017. Please choose 1 drum from
either lot 7811021 or 7811022.

Picked by:

Total Shipping units:

Gross Weight 390 LB
AB0000028806



12:09

KRAUS-FULLER SUPPLY 918/65723753

NO. 023

1001

STRAIGHT BILL OF LADING - SHORT FORM

Received, subject to all terms and conditions of the contract in effect between shipper and Carrier on the date of issue of this Bill of Lading, the property described below in accordance with order, except as noted. In the event no contract is in effect, the Terms and Conditions of the Uniform Domestic Storage Bill of Lading as set forth in the appropriate bill of lading classification shall apply.

CONSIGNEE:

AVENTIS CROPSCIENCE USA LP
133 E KRAUSS
ST LOUIS MO 63111
USA

CONSIGNOR (SHIPPER):

Aventis CropScience USA LLP
c/o Cedar Chemical Corporation
49 Phillips Road #311
Helena AR 72342
USA

BL NO.

80096435

Page: 1 of 1

Date: May 08, 2001

CARRIER: AMERICAN FREIGHT

VEHICLE NO.:

FREIGHT CHARGES: Prepaid

Carrier: Attach memorandum copy of Bill of Lading to Freight Bill and send to

AVENTIS CROPSCIENCE C/O FTS
C/O FTS FREIGHT PAYMENT PLAN
P. O. BOX 1259
SOMERVILLE NJ 08878-1259

24 HOUR EMERGENCY TELEPHONE NUMBER:

1-800-424-9300

SEAL NOS.

QUANTITY	MATERIAL NO.	DESCRIPTION	CLASS	TD	PG.	WEIGHT
3 Drums	120511	CHEMICALS, N.O.I. CYCLANILIDE FDRM 1X50KG US (PRODUCED) Please choose 1 drum from either lot 7811006 or 7811009. Please choose 1 drum from either lot 7811013 or 7811017. Please choose 1 drum from either lot 7811021 or 7811022. <i>Batch NO 7811022 7811013 7811009</i>				390 LB

Other signature acknowledges receipt of freight only
Terms & Conditions of ASPW Rules Tariff 120 apply

01452455-9



FCY

This is to certify that the above-named materials are properly classified, described, packaged, marked and labeled, and are in proper condition for transportation according to the applicable regulations of the Department of Transportation.

TOTAL SHIPPING UNITS

PLACARDS REQUIRED:

DECLARED VALUE OF SHIPMENT

PLACARDS SUPPLIED?

YES NO-FURNISHED BY CARRIER

HAZARD SUPPLIED?

YES NO-FURNISHED BY CARRIER

SHIPPER'S SIGNATURE _____

TOTAL WEIGHT

390 LB

Aventis
P.O. Box 12014
92 T.W. Alexander Drive
Research Triangle Park, North Carolina 27709

AMOUNT

FEE

TOTAL

Date: 5/09/01 P4174
Carrier: Gary (Blat) (1)

Date: 5-9-01
Consignee: Berni Faza

Shipper: Berni Faza

AB0000028841

STRAIGHT BILL OF LADING - SHORT FORM

Aventis

Received, subject to all terms and conditions of the contract in effect between shipper and Carrier on the date of issue of this Bill of Lading, the property described below in apparent good order, except as noted. In the event no contract is in effect, the Terms and Conditions of the Uniform Customs and Practice for Documentary Credits apply.

CONSIGNEE:
AVENTIS CROPSCIENCE USA LP
C/O NSY WAREHOUSES
8921 FROST AVE
BERKELEY MO 63134
USA

CONSIGNOR (SHIPPER):
Aventis CropScience USA LLP
c/o Cedar Chemical Corporation
49 Phillips Road #311
Helena AR 72342
USA

BL NO. 80105389
Page: 1 of 1
Date: June 19, 2001
CARRIER: EMPIRE EXPRESS
VEHICLE NO.: 53402
FREIGHT CHARGES: Prepaid

EMERGENCY TELEPHONE NUMBER:
1-800-424-9300

SEAL NOS. 18688

Carrier: Attach memorandum copy of Bill of Lading to Freight Bill and send to:
AVENTIS CROPSCIENCE C/O FTS
C/O FTS FREIGHT PAYMENT PLAN
P. O. BOX 1259
SOMERVILLE NJ 08876-1259

QUANTITY	UNIT	DESCRIPTION	CLASS	ID	PC	HAZAR	WEIGHT
130	DRUMS	CHEMICALS, N.D.I. CYCLANILIDE FDRM 1X50KG US (PRODUCED)					14,330 LBS. NET
		Must be released lot numbers only. Must deliver on June 22nd.					
		7811024 43 DRUMS					
		7811018 37 DRUMS					
		7811012 20 DRUMS					
		7811030 30 DRUMS					

		130 TOTAL					

This is to certify that the above-stated materials are properly classified, described, packaged, marked and labeled, and are in proper condition for transportation according to the applicable regulations of the Department of Transportation.

TOTAL SHIPPING UNITS

PLACARDS REQUIRED:

DECLARED VALUE OF SHIPMENT

PLACARDS SUPPLIED?
 YES NO-FURNISHED BY CARRIER
HAZARD SUPPLIED?
 YES NO-FURNISHED BY CARRIER
DRIVER'S SIGNATURE

Aventis
P.O. Box 12014
82 T.W. Alexander Drive
Research Triangle Park, North Carolina 27709

TOTAL WEIGHT 16,900 LB

C AMOUNT
O FEE
D TOTAL

Bennis Lopez

Date: 6-21-01
Carrier: [Signature]

Date: 6-21-01
Consignee: [Signature]

STRAIGHT BILL OF LADING - SHORT FORM

Aventis

Receipt, subject to all terms and conditions of the contract in effect between shipper and Carrier on the date of issue of this Bill of Lading, the property described herein is accepted good order, except as noted in the event no contract is in effect, the Terms and Conditions of the Uniform Domestic Freight Bill of Lading as set forth in the appropriate bill of lading classification shall apply.

COMBINEE:

AVENTIS CROPSCIENCE USA LP
C/O NEW MARKHOUSES
8021 FRONT AVE
BERKELEY MD 20814
USA

CONSIGNOR (SHIPPER):

Aventis CropScience USA LLP
c/o Cedar Chemical Corporation
49 Phillips Road #311
Helena AR 72342
USA

BL NO.

80105390

Page: 1 of 1

Date: June 19, 2001

CARRIER: **EMPIRE EXPRESS**

VEHICLE NO.: **53438**

FREIGHT CHARGES: **Prepaid**

Carrier: Attach memorandum copy of Bill of Lading to Freight Bill and send to:

AVENTIS CROPSCIENCE C/O FTS
C/O FTS FREIGHT PAYMENT PLAN
P. O. BOX 1259
SOMERVILLE NJ 08876-1259

24 HOUR EMERGENCY TELEPHONE NUMBER:

1-800 424 9300

SEAL NOS.

18691

QUANTITY	UNIT	DESCRIPTION	CLASS	ID	PG	MARK	WEIGHT
130		CHEMICALS, N.O.I.					
130 Drums	170311	CYANILIDE FORM 1X50KG US (PRODUCED)					14,330 LBS. NET
		Must be released lot numbers only. Must deliver on June 22nd.					
		7811025 44 DRUMS					
		7811036 1 DRUM					
		7811033 35 DRUMS					
		7811026 50 DRUMS					

		130 TOTAL					

This is to certify that the above-named materials are properly classified, described, packaged, marked and labeled, and are in proper condition for transportation according to the applicable regulations of the Department of Transportation

TOTAL SHIPPING UNITS

PLACARDS REQUIRED:
DECLARED VALUE OF SHIPMENT

PLACARDS SUPPLIED?
 YES NO-FURNISHED BY CARRIER
HAZARD SUPPLIED?
 YES NO-FURNISHED BY CARRIER
 DRIVER'S SIGNATURE _____

TOTAL WEIGHT

16,900 LB

Aventis
P.O. Box 12014
42 T.W. Alexander Drive
Research Triangle Park, North Carolina 27709

C AMOUNT
 O FEE
 D TOTAL

Date: 6-21-01

Date: 6-21-01

Bennis Yonice

Carrier: Jimmy D Rains

Consignee: Bennis Yonice

Aventis

Received, subject to all terms and conditions of the contract in effect between shipper and Carrier on the date of issue of this Bill of Lading, the property described below in approved good order, except as noted. In the event no contract is in effect, the Terms and Conditions of the Uniform Domestic Freight Bill of Lading as set forth in the appropriate rail or motor classification shall apply.

ORIGINATOR:

AVENTIS CROPSCIENCE USA LP
 C/O NEW WAREHOUSES
 1921 FRONT AVE
 BERKELEY MD 21104
 USA

CONSIGNEE (SHIPPER):

Aventis CropScience USA LP
 c/o Cedar Chemical Corporation
 49 Phillips Road #311
 Helena AR 72342
 USA

BL NO.

80105398

Page: 1 of 1

Date: June 19, 2001

CARRIER: EMPIRE EXPRESS

VEHICLE NO.: 53378

FREIGHT CHARGE: Prepaid

Carrier Attach memorandum copy of Bill of Lading to Freight Bill and send to

AVENTIS CROPSCIENCE C/O FTS
 C/O FTS FREIGHT PAYMENT PLAN
 P. O. BOX 1259
 SOMERVILLE NJ 08876-1259

24 HOUR EMERGENCY TELEPHONE NUMBER:

1 800-434-8000

SEAL NOS.

18683

QUANTITY	HAZARDOUS (IC, HM)	DESCRIPTION	CLASS	ID	PG	HAZAR	WEIGHT
1.00 Drums	1.0511	CHEMICALS, N.D.I. CYCLANILIDE FORM 1X50KG US (PRODUCED) Must be released lot numbers only. Must deliver on June 24th. 780006 14 Drums 7811015 24 Drums 7811021 40 Drums 7811026 16 Drums 7812027 36 Drums 7811015 - 25 Drs. 7811034 - 59 Drs. 7811035 - 46 Drs.					14,330 LBS. NE

This is to certify that the above-named materials are properly classified, described, packaged, marked and labeled, and are in proper condition for transportation according to the applicable regulations of the Department of Transportation.

TOTAL SHIPPING UNITS

PLACARDS SUPPLIED?
 YES NO-FURNISHED BY CARRIER
HAZARD SUPPLIED?
 YES NO-FURNISHED BY CARRIER
 DRIVER'S SIGNATURE _____

TOTAL WEIGHT **16,900 LI**

PLACARDS REQUIRED:

Address
 P.O. Box 12014
 62 T.W. Alexander Drive
 Research Triangle Park, North Carolina 27709

AMOUNT
 FEE
 TOTAL

DECLARED VALUE OF SHIPMENT

Date: 6-25-01

Date: 6-25-01

Signature: Benni Tordini

Signature: Jimmy D. Raines

Signature: Benni Tordini



STRAIGHT BILL OF LADING - SHORT FORM

Received, subject to all terms and conditions of the contract in effect between shipper and Carrier on the date of issue of this Bill of Lading, the property described herein in apparent good order, through its vessel, in the event no contract is in effect, the Terms and Conditions of the Uniform Domestic Straight Bill of Lading as set forth in the appropriate bill of lading classification shall apply.

CONSIGNEE:
AVENTIS CROPSCIENCE USA LP
C/O NSY WAREHOUSES
8921 FROST AVE
BERKELEY MO 63134
USA

CONSIGNOR (SHIPPER):
Aventis CropScience USA LLP
c/o Cedar Chemical Corporation
49 Phillipe Road #311
Malena AR 72342
USA

BL NO. 80105393
Page: 1 of 1
Date: June 19, 2001
CARRIER: EMPIRE EXPRESS
VEHICLE NO.: 53524
FREIGHT CHARGES: Prepaid

Carrier: Attach memorandum copy of Bill of Lading to Freight Bill and send to:

AVENTIS CROPSCIENCE C/O FTS
C/O FTS FREIGHT PAYMENT PLAN
P. O. BOX 1259
SOMERVILLE NJ 08876-1259

BY PHONE NUMBER:
1-800-424-9300

SEAL NOS.
18687

QUANTITY	UNIT	DESCRIPTION	CLASS	HT	PC	HAERG	WEIGHT
130	Drums	CHEMICALS, N.O.I. CYCLANILIDE FDRM 1X50KG US (PRODUCED)					16,900 LB 14,300 NET
		Must be released lot numbers only. Must deliver on June 28th.					
		7811023 31 DRUMS 7811042 40 DRUMS 7811055 59 DRUMS					
		----- 130 Total					

total = 130

We hereby certify that the above-named materials are properly classified, described, packaged, marked and labeled, and are in proper condition for transportation according to the applicable regulations of the Department of Transportation.

TOTAL SHIPPING UNITS

PLACARDS REQUIRED:

DECLARED VALUE OF SHIPMENT

PLACARDS SUPPLIED?

YES NO-FURNISHED BY CARRIER

HAERG SUPPLIED?

YES NO-FURNISHED BY CARRIER

OWNER'S SIGNATURE _____

TOTAL WEIGHT

16,900 LB

Aventis
P.O. Box 12014
62 T.W. Alexander Drive
Research Triangle Park, North Carolina 27709

C	AMOUNT
O	FEES
D	TOTAL

DATE: 6-27-01

DATE: 6-27-01

STRAIGHT BILL OF LADING - SHORT FORM



Received, subject to all terms and conditions of the contract in effect between Shipper and Carrier on the date of issue of this Bill of Lading, the property described herein in apparent good order. Except as noted, in the event no contract is in effect, the Terms and Conditions of the Uniform Domestic Freight Bill of Lading are set forth in the appropriate rail or motor classification that apply.

CONSIGNEE:

AVENTIS CROPSCIENCE USA LP
C/O NSY WAREHOUSES
8921 FROST AVE
BERKELEY MD 63134
USA

CONSIGNOR (SHIPPER):

Aventis CropScience USA LLP
c/o Cedar Chemical Corporation
49 Phillips Road #311
Helena AR 72342
USA

BL NO.

80105394

Page: 1 of 1

Date: July 18, 2001

CARRIER: EMPIRE EXPRESS

VEHICLE NO: 53428

FREIGHT CHARGES: Prepaid

Owner: Attach memorandum copy of Bill of Lading to Freight Bill and send

24 HOUR EMERGENCY TELEPHONE NUMBER:

1-800-424-9300

SEAL NOS. 18651

AVENTIS CROPSCIENCE C/O PTS
C/O PTS FREIGHT PAYMENT PLAN
P. O. BOX 1259
SOMERVILLE NJ 08876-1259

QUANTITY	MATERIAL NO	HM	DESCRIPTION	CLASS	ID	PG	VALU	WEIGHT
130 Drums	120511		<p>CHEMICALS, N.O.I.</p> <p>CYCLANILIDE FDRM 1X50KG US (PRODUCED)</p> <p>Must be released lot numbers only.</p> <p>7811011 25 7811022 22 7811046 40 7811039 32 7811038 11 ----- 130 TOTAL DRUMS</p>					16,900 LB

This is to certify that the above-named materials are properly classified, described, packaged, marked and labeled, and are in proper condition for transportation according to the applicable regulations of the Department of Transport

TOTAL SHIPPING UNITS

PLACARDS REQUIRED

YES NO-FURNISHED BY CARRIER

YES NO-FURNISHED BY CARRIER

OWNER'S SIGNATURE _____

TOTAL WEIGHT **16,900 LB**

DECLARED VALUE OF EQUIPMENT

Aventis
 P.O. Box 12514
 62 T.W. Alexander Drive
 Research Triangle Park, North Carolina 27709

C AMOUNT
D FEE
E TOTAL

Date: 7-18-01

Date: 7-18-01

Shipper: Benni Yonzu

Carrier: J.D. Raines

Consignee: Benni Yonzu

AB0000028841

STRAIGHT BILL OF LADING - SHORT FORM



Received, subject to all terms and conditions of the contract in effect between shipper and Carrier on the date of issue of this Bill of Lading, the property described hereinafter in apparent good order, except as noted, in the event no notation is in effect, the terms and conditions of the Uniform Customs and Practice for Documentary Credits apply.

CONSIGNEE:

CONSIGNEE (SHIPPER):

BL NO.

AVENTIS CROPSCIENCE USA LP
C/O NSV WAREHOUSES
8921 FROST AVE
BERKELEY MO 63134
USA

Aventis CropScience USA LLP
c/o Cedar Chemical Corporation
49 Phillips Road #311
Helena AR 72342
USA

80109216
Page: 1 of 1
Date: July 18, 2001
CARRIER: **EMPIRE EXPRESS**
VEHICLE NO.: **53422**
FREIGHT CHARGE: **Prepaid**

Carrier: Attach memorandum copy of Bill of Lading to Freight Bill and send

24 HOUR EMERGENCY TELEPHONE NUMBER:

SEAL NOS.

18649

1-800-424-9300

AVENTIS CROPSCIENCE C/O FTS
C/O FTS FREIGHT PAYMENT PLAN
P. O. BOX 1259
SOMERVILLE NJ 08878-1259

QUANTITY	MATERIAL NO	HM	DESCRIPTION	CLASS	U	PG	HAFCG	WEIGHT
130 Drums	120511		CHEMICALS, N.O.I. CYCLANILIDE FDM 1X50KG US (PRODUCED)					16,900 LB
			Must be released lot numbers only.					
			7811045 28					
			7811007 11					
			7811040 34					
			7811009 5					
			7811044 5					
			7811038 35					
			7811053 12					
			----- 130 TOTAL DRUMS					

This is to certify that the above-named materials are properly classified, described, packaged, marked and labeled, and are in proper condition for transportation according to the applicable regulations of the Department of Transport

TOTAL SHIPPING UNITS

PLACARDS REQUIRED:

YES NO-FURNISHED BY CARRIER

YES NO-FURNISHED BY CARRIER

TOTAL WEIGHT **16,900 LB**

DECLARED VALUE OF SHIPMENT

DRIVER'S SIGNATURE

Aventis
P.O. Box 12514
63 Tull Alexander Drive
Research Triangle Park, North Carolina 27709

C	AMOUNT
D	FEE
E	TOTAL

SHIPPER: Bern...toz

Date: 7-18-01

Date: 7-18-01

SHIPPER: Bern...toz

Carrier: Ad Raines

Consignee: Bern...toz



STRAIGHT BILL OF LADING - SHORT FORM

Received, subject to all terms and conditions of the contract in effect between shipper and Carrier on the date of issue of this Bill of Lading, the property described below in apparent good order, except as noted. In the event no contract is in effect, the Terms and Conditions of the Uniform Domestic Freight Bill of Lading as set forth in the appropriate rail or motor classification shall apply.

CONSIGNEE:

AVENTIS CROPSCIENCE USA LP
C/O NSY WAREHOUSES
8921 FROST AVE
BERKELEY MO 63134
USA

CONSIGNOR (SHIPPER):

Aventis CropScience USA LLP
c/o Cedar Chemical Corporation
49 Phillips Road #311
Helena AR 72342
USA

BL NO.

80110040

Page: 1 of 1

Date: July 20, 2001

CARRIER:

EMPIRE EXPRESS

VEHICLE NO.:

53391

FREIGHT CHARGES:

Prepaid

Carrier: Attach memorandum copy of Bill of Lading to Freight Bill and send

AVENTIS CROPSCIENCE C/O FTS
C/O FTS FREIGHT PAYMENT PLAN
P. O. BOX 1259
SOMERVILLE NJ 08876-1259

24 HOUR EMERGENCY TELEPHONE NUMBER:
1-800-424-9300

SEAL NOS.
18447

QUANTITY	MATERIAL NO.	DESCRIPTION	CLASS	ID	PG	CARR	WEIGHT
130 Drums	120911	CHEMICALS, N.O.I. CYCLANILIDE FORM 1X50KG US (PRODUCED)					16,900 LB
		7811030 3					
		7811040 6					
		7811031 5					
		7811023 15					
		7811008 16					
		7811050 44					
		7811043 41					
		7811041 3					
		7811038 1					
		7811048 3					
		----- 130 TOTAL DRUMS					

This is to certify that the above-named contents are properly classified, described, packaged, marked and labeled, and are in proper condition for transportation according to the applicable regulations of the Department of Transport

TOTAL SHIPPING UNITS

PLACARDS REQUIRED:

DECLARED VALUE OF SHIPMENT

PLACARDS REQUIRED?

YES NO - FURNISHED BY CARRIER

YES NO - FURNISHED BY CARRIER

DRIVER'S SIGNATURE _____

TOTAL WEIGHT **16,900 LB**

Aventis
P.O. Box 12514
92 T.W. Alexander Drive
Research Triangle Park, North Carolina 27709

C AMOUNT

O FEE

D TOTAL

Date: 7-23-01

Date: 7-23-01

Bernie Jones

Raymond Raines

Condition: Bernie Jones

AB0000028841



STRAIGHT BILL OF LADING - SHORT FORM

Receipt, subject to all terms and conditions of the contract in effect between shipper and Carrier at the date of issue of this Bill of Lading, the property described below is accepted good order, except as noted, in the event no notation is placed, the Terms and Conditions of the Uniform Customs and Practice for Documentary Credits apply.

CONSIGNEE:

AVENTIS CROPSCIENCE USA LP
C/O NSY WAREHOUSES
8921 FROST AVE
BERKELEY MD 63134
USA

CONSIGNEE (SHIPPER):

Aventis CropScience USA LLP
c/o Cedar Chemical Corporation
49 Phillips Road #311
Helena AR 72342
USA

BL NO.

80110039

Page: 1 of 1

Date: July 20, 2001

CARRIER: EMPIRE EXPRESS

VEHICLE NO: 53459

FREIGHT CHARGES: Prepaid

Caution: Attach memorandum copy of Bill of Lading to Freight Bill and send

AVENTIS CROPSCIENCE C/O FTS
C/O FTS FREIGHT PAYMENT PLAN
P. O. BOX 1259
SOMERVILLE NJ 08876-1259

24 HOUR EMERGENCY TELEPHONE NUMBER:
1-800-424-9300

SEAL NOS.
18650

QUANTITY	ASSEMBLY NO. (M)	DESCRIPTION	CLASS	U	PG	DAERG	WEIGHT
130 Drums	120911	CHEMICALS, M.D.I. CYCLANILIDE FDRM 1X50KG US (PRODUCED)					16,900 LB
		7811048 33 7811051 37 7811037 20 7811017 22 7811010 15 7811021 3 ----- 130 TOTAL DRUMS					

This is to certify that the above-named materials are properly classified, described, packaged, marked and labeled, and are in proper condition for transportation according to the applicable regulations of the Department of Transport

TOTAL SHIPPING UNITS

PLACARDS REQUIRED:

DECLARED VALUE OF SHIPMENT

PLACARDS REQUIRED

YES NO-FURNISHED BY CARRIER

YES NO-FURNISHED BY CARRIER

DRIVER'S SIGNATURE _____

TOTAL WEIGHT: 16,900 LB

AMOUNT

FEE

TOTAL

Aventis
P.O. Box 12314
63 T.W. Alexander Drive
Research Triangle Park, North Carolina 27709

Shipper: Benny Ford

Date: 7-23-01
Carrier: J.D. Raines

Date: 7-23-01
Consignee: Benny Ford



10:28

KHUNE-MULLEN SUPPLY → 918/65723795

NO. 1220

1403

STRAIGHT BILL OF LADING - SHORT FORM

Received, subject to all terms and conditions of the contract in effect between shipper and Carrier on the date of issue of this Bill of Lading, the property described herein in correct good order, except as noted, in the event no contract is in effect, the Terms and Conditions of the Uniform Domestic Bill of Lading as set forth in the appropriate rule or other classification shall apply.

CONSIGNEE:

AVENTIS CROPSCIENCE USA LP
C/O NSF WAREHOUSES
8921 FROST AVE
BERKELEY MO 63134
USA

CONSIGNOR (SHIPPER):

Aventis CropScience USA LLP
c/o Cedar Chemical Corporation
49 Phillips Road #311
Helena AR 72342
USA

BL NO.

80110038

Page: 1 of 1

Date: July 20, 2001

CARRIER:

EMPIRE EXPRESS

VEHICLE NO.:

S3 602

FREIGHT CHARGES:

Prepaid

Carrier: Attach memorandum copy of Bill of Lading to Freight Bill and send to

AVENTIS CROPSCIENCE C/O FTS
C/O FTS FREIGHT PAYMENT PLAN
P. O. BOX 1259
SOMERVILLE NJ 08876-1259

24 HOUR EMERGENCY TELEPHONE NUMBER:
1-800-424-9300

SEAL NOS.

18627

QUANTITY	GENERAL ID.	HAZ	DESCRIPTION	CLASS	IN	PO	WEIGHT
130 Drums	120511		CHEMICALS, N.O.I. CYCLANILIDE FDRM 1X50KG US (PRODUCED)				16,900 LB
			7811037 20				
			7811053 56				
			7811057 1				
			7811039 19				
			7811021 2				
			7811010 2				
			7811045 20				
			7811041 10				
			----- 130 TOTAL DRUMS				

This is to certify that the above-named materials are properly classified, described, packaged, marked and labeled, and are in proper condition for transportation according to the applicable regulations of the Department of Transportation.

TOTAL SHIPPING UNITS

PLACARDS REQUIRED:

DECLARED VALUE OF SHIPMENT

PLACARDS REQUIRED

YES NO - FURNISHED BY CARRIER

HAZARDOUS MATERIALS

YES NO - FURNISHED BY CARRIER

DRIVER'S SIGNATURE: _____

TOTAL WEIGHT

16,900 LB

Aventis
P.O. Box 12014
42 T.W. Alexander Drive
Research Triangle Park, North Carolina 27709

C AMOUNT

O FEE

D TOTAL

Date: 7-25-01

Date: 7-25-01

Signature: Benni Tonz

Signature: Ad Raines

Consignee: Benni Tonz

AB0000028841

STRAIGHT BILL OF LADING - SHORT FORM



Received, subject to all terms and conditions of the contract in effect between shipper and Carrier on the date of issue of this Bill of Lading, the property described below in apparent good order, except as noted. In the event no contract is in effect, the Terms and Conditions of the Uniform Domestic Straight Bill of Lading as set forth in the appropriate act or state classification shall apply.

CONSIGNEE:

AVENTIS CROPSCIENCE USA LP
C/O COASTLAND WAREHOUSE COMPANY
125 COLMAN BLVD PORT AUTHORITY
SAVANNAH GA 31408
USA

CONSIGNOR (SHIPPER):

Aventis CropScience USA LP
c/o Cedar Chemical Corporation
49 Phillips Road #311
Helena AR 72342
USA

BL NO.

80110886

Page: 1 of 1

Date: July 26, 2001

CARRIER: **EMPIRE EXPRESS**

VEHICLE NO.: **53425**

FREIGHT CHARGES: **Prepaid**

Carrier: Attach memorandum copy of Bill of Lading to Freight Bill and send 1

AVENTIS CROPSCIENCE C/O FTS
C/O FTS FREIGHT PAYMENT PLAN
P. O. BOX 1259
SOMERVILLE NJ 08876-1259

24 HOUR EMERGENCY TELEPHONE NUMBER:

1-800-424-9300

SEAL NOS.

18682

QUANTITY	MATERIAL ID/IMA	DESCRIPTION	CLASS	TO	INC	DATE	WEIGHT
130 Drums	120511	CHEMICALS, N.O.I. CYCLANILIDE FDRM 1X50KG US (PRODUCED) Must be released lot numbers only. 7811060 53 7811032 40 7811058 32 7811061 5 ----- 130 TOTAL DRUMS					16,900 LB

This is to certify that the above-named materials are properly classified, described, packaged, marked and labeled, and are in proper condition for transportation according to the applicable regulations of the Department of Transport.

TOTAL SHIPPING UNITS

PLACARDS REQUIRED:

DECLARED VALUE OF SHIPMENT

PLACARDS SUPPLIED

YES NO-FURNISHED BY CARRIER

YES NO-FURNISHED BY CARRIER

OWNER'S SIGNATURE _____

TOTAL WEIGHT

16,900 LB

Aventis
P.O. Box 12014
63 T.W. Alexander Drive
Research Triangle Park, North Carolina 27709

<input type="checkbox"/>	AMOUNT
<input type="checkbox"/>	FEE
<input type="checkbox"/>	TOTAL

Date: 7-31-01

Date: 7-31-01

Benjamin Ford

Donnell Pugh

Benjamin Ford



STRAIGHT BILL OF LADING - SHORT FORM

Received, subject to all terms and conditions of the contract in effect between shipper and carrier on the date of issue of this Bill of Lading, the property described herein is accepted and order is issued as noted in the event no contract is in effect, the Terms and Conditions of the Uniform Domestic Straight Bill of Lading as set forth in the appropriate act or acts shall apply.

CONSIGNEE:

CONSIGNOR (SHIPPER):

B/L NO.

AVENTIS CROPSCIENCE USA LP
C/O NSY WAREHOUSES
8921 FROST AVE
BERKELEY MD 63134
USA

Aventis CropScience USA LLP
c/o Cedar Chemical Corporation
49 Phillips Road #311
Helena AR 72342
USA

80110887

Page:1 of 1
Date: July 26, 2001
CARRIER: EMPIRE EXPRESS
VEHICLE NO: 53339
FREIGHT CHARGES: Prepaid

Carrier Attach memorandum copy of Bill of Lading to Freight Bill and send to

24 HOUR EMERGENCY TELEPHONE NUMBER:

SEAL NOS.

1-800-424-9300

18659

AVENTIS CROPSCIENCE C/O FTS
C/O FTS FREIGHT PAYMENT PLAN
P. O. BOX 1259
SOMERVILLE NJ 08876-1259

Table with columns: QUANTITY, MATERIAL NO, DESCRIPTION, CLASS, ID, P.O. NO, WEIGHT. Row 1: 130 Drums, 120511, CHEMICALS, N.O.I. CYCLANILIDE FDM 1X50KG US (PRODUCED), 16,900 LB. Includes lot numbers and total drums count.

This is to certify that the above-named materials are properly classified, described, packaged, marked and labeled, and are in proper condition for transportation according to the applicable regulations of the Department of Transportation.

TOTAL SHIPPING UNITS

PLACARDS REQUIRED:

DECLARED VALUE OF SHIPMENT

PLACARD REQUIREMENTS section with checkboxes for YES/NO for various regulations.

TOTAL WEIGHT

16,900 LB

Aventis
P.O. Box 12014
#2 T.M. Alexander Drive
Research Triangle Park, North Carolina 27709

Summary table with columns: C AMOUNT, D FEE, D TOTAL

Date: 7-31-01

Date: 2-30-01

Shipper: Bennett

Carrier: J.D. Raines

Consignee: Bennet

AB0000028841

STRAIGHT BILL OF LADING - SHORT FORM



Received, subject to all terms and conditions of the contract in effect between shipper and Carrier on the date of issue of this Bill of Lading, the property described below in apparent good order, except as noted. In the event no contract is in effect, the Terms and Conditions of the Uniform Customs and Practice for Documentary Credits apply.

CONSIGNEE:

AVENTIS CROPSCIENCE USA LP
C/O NSY WAREHOUSES
8921 FROST AVE
BERKELEY MO 63134
USA

CONSIGNEE (SHIPPER):

Aventis CropScience USA LLP
c/o Cedar Chemical Corporation
49 Phillips Road #311
Helena AR 72342
USA

BL NO.

80110888

Page: 1 of 1

Date: July 26, 2001
CARRIER: EMPIRE EXPRESS
VEHICLE NO: 53645
FREIGHT CHARGES: Prepaid

Order: Attach memorandum copy of Bill of Lading to Freight Bill and send

24 HOUR EMERGENCY TELEPHONE NUMBER:
1-800-424-9300

SEAL NOS. 18679

AVENTIS CROPSCIENCE C/O FTS
C/O FTS FREIGHT PAYMENT PLAN
P. O. BOX 1259
SOMERVILLE NJ 08876-1259

QUANTITY	DATE/BL NO./RM	DESCRIPTION	CLASS	ID	PG	WEIGHT
44 Drums	120511	<p>CHEMICALS, N.O.I.</p> <p>CYCLANILIDE FDM 1X50KG US (PRODUCED)</p> <p>Must be released lot numbers only.</p> <p>7811063 - 44 DRUMS</p>				5,720 LB

This is to certify that the above-named materials are properly classified, described, packaged, marked and labeled, and are in proper condition for transportation according to the applicable regulations of the Department of Transport.

TOTAL SHIPPED UNITS

PLACARDS REQUIRED:

DECLARED VALUE OF SHIPMENT

PLACARDS REQUIRED:

YES NO - FURNISHED BY CARRIER

YES NO - FURNISHED BY CARRIER

SHIPPER'S SIGNATURE _____

TOTAL WEIGHT

5,720 LB

Aventis
 P.O. Box 12014
 62 TW Alexander Drive
 Research Triangle Park, North Carolina 27709

C	AMOUNT
D	FEE
E	TOTAL

Date: 7-31-01

Date: 7-31-01

Shipper: Benni Foster

Carrier: J.D. Raines

Consignee: Benni Foster

AB0000028841



12:14

INVENTUREL SUIT 7 3106023100

STRAIGHT BILL OF LADING - SHORT FORM

REV. 03/1

1/9/02

Received, subject to all terms and conditions of the contract in effect between shipper and Carrier on the date of issue of this Bill of Lading, the accuracy of which is assumed by the shipper, except as noted, in the event no contract is in effect, the Terms and Conditions of the Uniform Domestic Tariff Bill of Lading as set forth in the appropriate rule or custom of the country of origin shall apply.

CONSIGNEE:

**AVENTIS CROPSCIENCE USA LP
% WRIGHT DISTRIBUTION CENTER INC
1-75 EXIT 122
1000 HANTHORN RD
LIMA OH 45804
USA**

CONSIGNEE (SHIPPER):

**Aventis CropScience USA LP
c/o Cedar Chemical Corporation
49 Phillips Road #311
Helena AR 72342
USA**

BL NO.

80098429

Page: 1 of 1

Date: 5/21/01

CARRIER: Transcarriers

VEHICLE NO.:

FREIGHT CHARGES: Prepaid

Carrier: Attach memorandum copy of Bill of Lading to Freight Bill and invoice

**24 HOUR EMERGENCY TELEPHONE NUMBER:
1-800-424-9300**

SEAL NOS. 18644

**AVENTIS CROPSCIENCE C/O FTS
C/O FTS FREIGHT PAYMENT PLAN
P. O. BOX 1259
SONKERVILLE NJ 08876-1259**

QUANTITY	CATCHER NO	PKG	DESCRIPTION	CLASS	NO	PKG	WEIGHT
72 Drums	109671	X	DICHLORANILINE, SOLID RD(2,4-DICHLORANILINE) MARINE POLLUTANT INSECTICIDES OR FUNGICIDES, N.O.I., OTHER THAN POISON 2,4-DCA (2,4-DICHLORANILINE) 1x200kg. net	6.1	UN1590	II	153
							LBS. 43,000 42,840

NO: 6069

This bill is only valid if the above-stated contents are properly detailed, described, packaged, marked and labeled, and are in proper condition for transportation according to the applicable regulations of the Department of Transport.

TOTAL SHIPPING UNITS

PLACARDS REQUIRED:

DECLARED VALUE OF SHIPMENT

PLACARDS SUPPLIED

YES NO - FURNISHED BY CARRIER

HAZARD SUPPLIED

YES NO - FURNISHED BY CARRIER

DRIVER'S SIGNATURE: *[Signature]*

TOTAL WEIGHT

18,720 L

AMOUNT

FEE

TOTAL

Aventis
P.O. Box 12014
92 TRL Alexander Drive
Research Triangle Park, North Carolina 27709

Date: 5-21-01

Date: 5-21-01

Carrier: Transcarriers

Consignee: Berni Lopez

43 en. Jar 2

AB0000028841



STRAIGHT BILL OF LADING - SHORT FORM

Recipient, subject to all terms and conditions of the contract in effect between shipper and Carrier on the date of issue of this Bill of Lading, the property described herein is accepted and code (except as noted, in the event no contract is in effect, the Terms and Conditions of the Uniform Customs and Practice for International Documents for Bill of Lading as set forth in the appropriate rule or other classification shall apply.

CONSIGNEE:

**AVENTIS CROPSCIENCE USA LP
% WRIGHT DISTRIBUTION CENTER INC
1-75 EXIT 122
1000 HANTHORN RD
LIMA OH 45804
USA**

CONSIGNEE (SHIPPER):

**Aventis CropScience USA LLP
c/o Cedar Chemical Corporation
49 Phillips Road #311
Helena AR 72342
USA**

BL NO.:

80096428

Page: 1 of 1

Date: 5/21/01

CARRIER: Transcarriers

VEHICLE NO.:

FREIGHT CHARGES: Prepaid

Carrier: Attach memorandum copy of Bill of Lading to Freight Bill and set

**AVENTIS CROPSCIENCE C/O FTS
C/O FTS FREIGHT PAYMENT PLAN
P. O. BOX 1259
SOMERVILLE NJ 08878-1259**

24 HOUR EMERGENCY TELEPHONE NUMBERS

1-800-424-9300

SEAL NOS.

QUANTITY	MATERIAL NUMBER	DESCRIPTION	CLASS	UNIT	WT	NET WT	WEIGHT
		I DICHLORDANILINE, SOLID RD(2,4-DICHLORDANILINE) MARINE POLLUTANT	6.1	UNL590	II	153	
		INSECTICIDES OR FUNGICIDES, N.O.I., OTHER THAN POISON					
.68 Drums	109671	2,4-DCA (2,4-DICHLORDANILINE) 1x200kg (net) 270kg					LBS.
		5/22?					42,000 40,460 MR

This is to certify that the above-named materials are properly classified, described, packaged, marked and labeled, and are in proper condition for transportation according to the applicable regulations of the Department of Transport.

TOTAL SHIPPING UNITS

PLACARDS REQUIRED:

DECLARED VALUE OF SHIPMENT

PLACARDS SUPPLIED:
 YES NO-FURNISHED BY CARRIER
HAZARD SUPPLEMENT:
 YES NO-FURNISHED BY CARRIER
DRIVER'S SIGNATURE _____

TOTAL WEIGHT

18,720 LB

**Aventis
P.O. Box 12014
48 T.W. Alexander Drive
Research Triangle Park, North Carolina 27709**

**C AMOUNT
O FEE
D TOTAL**

Date: _____

Date: _____



STRAIGHT BILL OF LADING - SHORT FORM

Received, subject to all terms and conditions of the contract in effect between shipper and Carrier on the date of issue of this Bill of Lading, the property described herein in accordance with weight, except as noted, in the event no contract is in effect, the Terms and Conditions of the Uniform Customs and Practice for Documentary Credits of the International Chamber of Commerce shall apply.

CONSIGNEE:

AVENTIS CROPSCIENCE USA LP
X WRIGHT DISTRIBUTION CENTER INC
1-75 EXIT 122
1000 HARTHORN RD
LIMA OH 45804
USA

CONSIGNEE (SHIPPER):

Aventis CropScience USA LLP
c/o Cedar Chemical Corporation
49 Phillips Road #311
Helena AR 72342
USA

BL NO.

80096430

Page: 1 of 1

Date: 5/22/01

CARRIER: Transcarriers

VEHICLE NO.:

FREIGHT CHARGES: Prepaid

Carrier: Attach memorandum copy of Bill of Lading to Freight Bill and send

24 HOUR EMERGENCY TELEPHONE NUMBER:

1-800-424-9300

SEAL NOS.

18653

AVENTIS CROPSCIENCE C/O FTS
C/O FTS FREIGHT PAYMENT PLAN
P. O. BOX 1259
SOMERVILLE NJ 08876-1259

QUANTITY	UNIT	DESCRIPTION	CLASS	TD	PG	WGT	WGT
72	Drums	DICHLOROANILINE, SOLID RD(2,4-DICHLOROANILINE) MARINE POLLUTANT INSECTICIDES OR FUNGICIDES, N.O.I., OTHER THAN POISON 2,4-DCA (2,4-DICHLOROANILINE) 1x200kg.	6.1	UN1990	II	153	
							LBS.
							43,000 42,840

Truck No 754

This is to certify that the above-named materials are properly classified, described, packaged, marked and labeled, and are in proper condition for transportation according to the applicable regulations of the Department of Transport.

TOTAL SHIPPING UNITS

PLACARDS REQUIRED:

DECLARED VALUE OF SHIPMENT

PLACARDS SUPPLIED:

YES NO - FURNISHED BY CARRIER
HAZARD SUPPLIED:

YES NO - FURNISHED BY CARRIER

DRIVER'S SIGNATURE _____

TOTAL WEIGHT

18,720 LB

Aventis
P.O. Box 12014
68 T.M. Alexander Drive
Research Triangle Park, North Carolina 27709

AMOUNT

FEE

TOTAL

CUSTOMER

DATE

5-2-01

R .4-?

Signature: *Bob Hoover* Benoit

AD0000020041

STRAIGHT BILL OF LADING - SHORT FORM



Proceed, subject to all terms and conditions of the contract in effect between shipper and carrier on the date of issue of this Bill of Lading, the property described below in separate good order, except as noted, in the event no contract is in effect, the terms and conditions of the Uniform Domestic Straight Bill of Lading as set forth in the appropriate rule or motor classification shall apply.

CONSIGNEE:

AVENTIS CROPSCIENCE USA LP
% WRIGHT DISTRIBUTION CENTER INC
1-75 EXIT 122
1000 HANTHORN RD
LIMA OH 45804
USA

CONSIGNOR (SHIPPER):

Aventis CropScience USA LLP
c/o Cedar Chemical Corporation
49 Phillips Road #311
Helena AR 72342
USA

BL NO.

80096431

Page: 1 of 1

Date: May 09, 2001

CARRIER: AMERICAN FREIGHT

VEHICLE NO.:

FREIGHT CHARGES: Prepaid

Carrier: Attach memorandum copy of Bill of Lading to Freight Bill and send

24 HOUR EMERGENCY TELEPHONE NUMBER:
1-800-424-9300

SEAL NOS. _____

AVENTIS CROPSCIENCE C/O FTS
C/O FTS FREIGHT PAYMENT PLAN
P. O. BOX 1259
SOMERVILLE NJ 08876-1259

QUANTITY	MATERIAL NO	HTM	DESCRIPTION	CLASS	ID	P.G.	HAZPG	WEIGHT
23 Drums	109671	X	DICHLOROANILINE, SOLID RD (2,4-DICHLOROANILINE) MARINE POLLUTANT INSECTICIDES OR FUNGICIDES, N.O.I., OTHER THAN POISON 2,4-DCA (2,4-DICHLOROANILINE). 1x200kg net	6.1	UN1590	II	153	10,141 LBS.

This is to certify that the above-named materials are properly classified, described, packaged, marked and labeled, and are in proper condition for transportation according to the applicable regulations of the Department of Transport.

TOTAL SHIPPING UNITS

PLACARDS REQUIRED:

DECLARED VALUE OF EQUIPMENT

PLACARDS SUPPLIED?
 YES NO-FURNISHED BY CARRIER
HAZPG SUPPLIED?
 YES NO-FURNISHED BY CARRIER
 DRIVER'S SIGNATURE _____

TOTAL WEIGHT

5,980 LB

Aventis
P.O. Box 12014
62 T.W. Alexander Drive
Research Triangle Park, North Carolina 27706

C	AMOUNT
O	FEE
O	TOTAL

Date: _____

Date: _____

Shipper: _____

Consignor: _____

Consignee: _____

AB0000028781

CEDAR CHEMICAL CORPORATION

49 PHILLIPS 311

HELENA, AR 72390

(870)572-3701 FAX(870)572-3795

FACSIMILE TRANSMITTAL SHEET

TO: CRAIG

FROM: LISA

COMPANY: AVENTIS

DATE: September 17, 2001

FAX NUMBER: 919-549-2200

TOTAL NO. OF PAGES INCLUDING COVER: 3

AB0000028781

STRAIGHT BILL OF LADING - SHORT FORM



Received, subject to all terms and conditions of the contract in effect between shipper and Carrier on the date of issue of this Bill of Lading, the property described below in separate good order, except as noted. In the event no contract is in effect, the Terms and Conditions of the Uniform Domestic Straight Bill of Lading as set forth in the appropriate rate or motor classification shall apply.

CONSIGNEE:

CONSIGNOR (SHIPPER):

BL NO.:

AVENTIS CROPSCIENCE USA LP
C/O NSY WAREHOUSES
8921 FROST AVE
BERKELEY MO 63134
USA

Aventis CropScience USA LLP
c/o Cedar Chemical Corporation
49 Phillips Road #311
Helena AR 72342
USA

80107047
Page: 1 of 1
Date: **June 28, 2001**
CARRIER: **EMPIRE EXPRESS**
VEHICLE NO.:
FREIGHT CHARGES: **Prepaid**

Carrier: Attach memorandum copy of Bill of Lading to Freight Bill and send to

24 HOUR EMERGENCY TELEPHONE NUMBER:
1-800-424-9300

SEAL NOS. 20096

AVENTIS CROPSCIENCE C/O FTS
C/O FTS FREIGHT PAYMENT PLAN
P. O. BOX 1259
SOMERVILLE NJ 08876-1259

QUANTITY	MATERIAL NO.	DESCRIPTION	CLASS	ID	PG	HAERG	WEIGHT
130 Drums	120511	CHEMICALS, N.O.I. CYCLANILIDE FDRM 1X50KG US (PRODUCED) Must be released lot numbers only. 7811055 10 7811056 44 7811042 1 7811054 64 7811057 10 7811038 1 ----- 130 TOTAL DRUMS					16,900 LB

This is to certify that the above-named materials are properly classified, described, packaged, marked and labeled, and are in proper condition for transportation according to the applicable regulations of the Department of Transportation.

TOTAL SHIPPING UNITS

PLACARDS SUPPLIED?
 YES NO-FURNISHED BY CARRIER
HAERG SUPPLIED?
 YES NO-FURNISHED BY CARRIER
 DRIVER'S SIGNATURE _____

TOTAL WEIGHT
16,900 LB

PLACARDS REQUIRED:

DECLARED VALUE OF SHIPMENT

Aventis
P.O. Box 12014
#2 T.W. Alexander Drive
Research Triangle Park, North Carolina 27709

C	AMOUNT
O	FEE
D	TOTAL

Shipper: B. Ennis Forster

Date: _____
Carrier: _____

Date: 6-29-01
Consignee: B. Ennis Forster



07/20/01

10:20

NUMERICAL SUPPLY 918705723750

NU. 026

004

STRAIGHT BILL OF LADING - SHORT FORM

Received, subject to all terms and conditions of the contract in effect between shipper and Carrier on the date of issue of this Bill of Lading, the property described herein in apparent good order, except as noted, in the event no contract is in effect, the Terms and Conditions of the Uniform Customs and Practice for Documentary Credits apply.

CONSIGNEE:

AVENTIS CROPSCIENCE USA LP
C/O NSY WAREHOUSES
8921 FROST AVE
BERKELEY MO 63134
USA

CONSIGNOR (SHIPPER):

Aventis CropScience USA LLP
c/o Cedar Chemical Corporation
49 Phillips Road #311
Helena AR 72342
USA

BA NO.

80110037

Page: 1 of 1

Date: July 20, 2001

CARRIER: **EMPIRE EXPRESS**

VEHICLE NO: **53413**

FREIGHT CHARGES: **Prepaid**

Carrier Attach memorandum copy of Bill of Lading to Freight Bill and send

AVENTIS CROPSCIENCE C/O FTS
C/O FTS FREIGHT PAYMENT PLAN
P. O. BOX 1259
SOMERVILLE NJ 08876-1259

24 HOUR EMERGENCY TELEPHONE NUMBER:
1-800-424-9300

SEAL NOS.

18670

QUANTITY	MATERIAL NO.	HM	DESCRIPTION	CLASS	ID	FG	HAERC	WEIGHT
130 Drums	120511		CHEMICALS, N.O.I. CYCLANILIDE FDM 1X50KG US (PRODUCED)					16,900 LB
			7811032 51					
			7811047 15					
			7811049 20					
			7811017 5					
			7811052 2					
			7811041 33					
			7811040 2					
			7811039 1					
			7811050 1					
			----- 130 TOTAL					

This is to certify that the above-named materials are properly classified, described, packaged, marked and labeled, and are in proper condition for transportation according to the applicable regulations of the Department of Transportation.

TOTAL SHIPPING UNITS

PLACARDS REQUIRED:

DECLARED VALUE OF SHIPMENT

PLACARDS SUPPLIED:

YES NO-FURNISHED BY CARRIER

YES NO-FURNISHED BY CARRIER

DRIVER'S SIGNATURE _____

Aventis
P.O. Box 12014
92 T.W. Alexander Drive
Research Triangle Park, North Carolina 27709

TOTAL WEIGHT

16,900 LB

C AMOUNT

O FEE

D TOTAL

Date: 7-26-01

Date: Benji Yonju 7-26

Shipper: Benji Yonju

Carrier: [Signature]

Consignee: Benji Yonju

AB0000028781

**CYCLANILIDE PRODUCTION
2001**

Batch#	#drums produced	# drums shipped	Difference
780008	13	13	0
7811007	12	11	1
7811008	16	16	0
7811009	6	6	0
7811010			
7811010	17	17	0
7811011	25	25	0
7811012	20	20	0
7811013	21	1	20
7811014	34	34	0
7811015			
7811015	49	49	0
7811016			
7811016	26	26	0
7811017			
7811017	28	27	1
7811018	37	37	0
7811020	32	32	0
7811021			
7811021			
7811021	45	45	0
7811022			
7811022	24	22	2
7811023			
7811023	43	45	-2
7811024	43	43	0
7811025	44	44	0
7811026			
7811026	66	66	0
7811027	65	65	0
7811028	59	59	0
7811029			
7811029	34	38	-4
7811030			
7811030	43	33	10
7811031	46	5	41
7811032			
7811032		40	-40
7811033			
7811033	40	40	0
7811034	59	59	0
7811035	45	46	-1
7811036	38	1	37
7811037			
7811037	39	41	-2
7811038			
7811038			0

7811038			0
7811038	47	47	0
7811039			0
7811039			0
7811039	52	52	0
7811040			0
7811040			0
7811040	42	42	0
7811041			0
7811041			0
7811041	46	46	0
7811042			0
7811042	41	41	0
7811043	34	34	0
7811044	66	5	61
7811045			0
7811045	48	53	-5
7811046	40	40	0
7811047	15	15	0
7811048			0
7811048	36	36	0
7811049	20	20	0
7811050			0
7811050	45	45	0
7811051	34	37	-3
7811052	58	2	56
7811053			0
7811053	68	68	0
7811054	64	64	0
7811055			0
7811055	69	69	0
7811056	44	44	0
7811057			0
7811057	45	11	34
7812027	36	36	0
7811032	29	51	-22
7811058	32	32	0
7811060	59	55	4
7811061	52	50	2
7811063	49	49	0
7811064	78	78	0
7801102rw	-34		-34
7811013rw	-21		-21
7811019rw	-38		-38
7811052rw	-58		-58
7801108rw	-13		-13
Totals	2154	2128	26

	lbs	kgs		lbs	kgs
2154 drums=	236,940.00	107,475.28	2128drums=	234,080.00	106,177.99
					1,297.29

To: +8705723795

From: AgrEvo

Fax:

TOPCALL at: JUL-20-2001-11:18 Doc: 255 Page: 001
Page 1 of 1

July 20, 2001

Delivery: 80110037
Del. Created By: Craig Dodson
Route: 000033

Requested Date: July 24, 2001
Carrier: ROUTING GUIDE
Freight Charges: Prepaid

SHIP-TO: USB9
AVENTIS CROPSCIENCE USA LP
C/O NSY WAREHOUSES
8921 FROST AVE
BERKELEY MO 63134
USA

SHIP-FROM: USD7
Aventis CropScience
c/o Cedar Chemical Corporation
49 Phillips Road #311
Helena AR 72342
USA

Item	Material	Description	Quantity	UOM	Quantity picked	Weight	UOM
000001	120511	CYCLANILIDE FDRM 1X50KG US (PRODUCED) CHEMICALS, N.O.I.	130	DRM		16900	LB

Order#: 712001

Order Taken By: Craig Dodson

Picked by:

Total Shipping units:

Gross Weight 16900 LB
AB0000028781

July 20, 2001

Delivery: 80110038
Del. Created By: Craig Dodson
Route: 000033

Requested Date: July 25, 2001
Carrier: ROUTING GUIDE
Freight Charges: Prepaid

SHIP-TO: USB9
AVENTIS CROPSCIENCE USA LP
C/O NSY WAREHOUSES
8921 FROST AVE
BERKELEY MO 63134
USA

SHIP-FROM: USD7
Aventis CropScience
c/o Cedar Chemical Corporation
49 Phillips Road #311
Helena AR 72342
USA

Item	Material	Description	Quantity	UOM	Quantity picked	Weight	UOM
000001	120511	CYCLANILIDE FDRM 1X50KG US (PRODUCED) CHEMICALS, N.O.I.	130	DRM		16900	LB

Order#: 712002

Order Taken By: Craig Dodson

Picked by:

Total Shipping units:

Gross Weight 16900 LB
AB0000028781

July 20, 2001

Delivery: 80110039
Del. Created By: Craig Dodson
Route: 000033

Requested Date: July 26, 2001
Carrier: ROUTING GUIDE
Freight Charges: Prepaid

SHIP-TO: USB9
AVENTIS CROPSCIENCE USA LP
C/O NSY WAREHOUSES
8921 FROST AVE
BERKELEY MO 63134
USA

SHIP-FROM: USD7
Aventis CropScience
c/o Cedar Chemical Corporation
49 Phillips Road #311
Helena AR 72342
USA

Item	Material	Description	Quantity	UOM	Quantity picked	Weight	UOM
000001	120511	CYCLANILIDE FDRM CHEMICALS, N.O.I.	130	DRM	_____	16900	LB

Order#: 712003

Order Taken By: Craig Dodson

July 20, 2001

Delivery: 80110040
Del. Created By: Craig Dodson
Route: 000033

Requested Date: July 27, 2001
Carrier: ROUTING GUIDE
Freight Charges: Prepaid

SHIP-TO: USB9
AVENTIS CROPSCIENCE USA LP
C/O NSY WAREHOUSES
8921 FROST AVE
BERKELEY MO 63134
USA

SHIP-FROM: USD7
Aventis CropScience
c/o Cedar Chemical Corporation
49 Phillips Road #311
Helena AR 72342
USA

Item	Material	Description	Quantity	UOM	Quantity picked	Weight	UOM
000001	120511	CYCLANILIDE FDRM 1X50KG US (PRODUCED) CHEMICALS, N.O.I.	130	DRM	-----	16900	LB

Order#: 712004

Order Taken By: Craig Dodson



STANDARD BILL OF LADING - SHORT FORM

Accepted, subject to all terms and conditions of the contract in effect between shipper and Carrier on the date of issue of this Bill of Lading, the property described below is accepted upon order, except as noted. In the event no contract is in effect, the Terms and Conditions of the Uniform Commercial Code's Standard Bill of Lading as set forth in the appropriate rail or motor classification shall apply.

CONSIGNEE:

AVENTIS CROPSCIENCE USA LP
133 E KRAUSS
ST LOUIS MO 63111
USA

CONSIGNOR (SHIPPER):

Aventis CropScience USA LLP
c/o Cedar Chemical Corporation
49 Phillipe Road #311
Helena AR 72342
USA

BL NO.

80104460

Page: 1 of 1

Date: June 14, 2001

CARRIER: EMPIRE EXPRESS

VEHICLE NO.: 53498

FREIGHT CHARGES: Prepaid

NOTE: Attach memorandum copy of Bill of Lading to Freight Bill and send to

AVENTIS CROPSCIENCE C/O FTS
C/O FTS FREIGHT PAYMENT PLAN
P. O. BOX 1259
SOMERVILLE NJ 08876-1259

24 HOUR EMERGENCY TELEPHONE NUMBER:
1-800-424-9300

SEAL NOS. 18662

QUANTITY	MATERIAL NO.	DESCRIPTION	CLASS	ID	P.C.	NAERG	WEIGHT	
130 Drums	120511	CHEMICALS, N.O.I. CYCLANILIDE FDRM 1X50KG US (PRODUCED) Must be released lot numbers. 7811014 34 DRUMS 7811016 1 DRUM 7811020 32 DRUMS 7811028 59 DRUMS 7811029 4 DRUMS ---- 130 TOTAL					14,330 LBS. NET	
		Seal 18662						

This is to certify that the above-named materials are properly classified, described, packaged, marked and labeled, and are in proper condition for transportation according to the applicable regulations of the Department of Transportation.

TOTAL SHIPPING UNITS

PLACARDS SUPPLIED:
 YES NO-FURNISHED BY CARRIER
 NAERG SUPPLIED:
 YES NO-FURNISHED BY CARRIER
 DRIVER'S SIGNATURE _____

TOTAL WEIGHT 16,900 LB

PLACARDS REQUIRED:

DECLARED VALUE OF SHIPMENT

Aventis
P.O. BOX 12014
43 T.W. Alexander Drive
Research Triangle Park, North Carolina 27709

C	AMOUNT
D	FEES
E	TOTAL

Date: 6-15-01

Date: 6-15-01

Shipper: Berni Fortz

Carrier: Marty Bush

Consignee: Berni Fortz



STRAIGHT BILL OF LADING - SHORT FORM

Received, subject to all terms and conditions of the contract in effect between shipper and Carrier on the date of issue of this Bill of Lading, the property described below in apparent good order, except as noted. In the event no contract is in effect, the Terms and Conditions of the Uniform Domestic Straight Bill of Lading as set forth in the appropriate rail or motor classification shall apply.

CONSIGNEE:

AVENTIS CROPSCIENCE USA LP
133 E KRAUSS
ST LOUIS MO 63111
USA

CONSIGNOR (SHIPPER):

Aventis CropScience USA LLP
c/o Cedar Chemical Corporation
49 Phillips Road #311
Helena AR 72342
USA

SA NO.

80104459

Page: 1 of 1

Date: June 14, 2001

CARRIER:

EMPIRE EXPRESS

VEHICLE NO.:

53397

FREIGHT CHARGES:

Prepaid

Carrier: Attach memorandum copy of Bill of Lading to Freight Bill and send

AVENTIS CROPSCIENCE C/O FTS
C/O FTS FREIGHT PAYMENT PLAN
P. O. BOX 1259
SOMERVILLE NJ 08876-1259

SEAL NOS. 18678

24 HOUR EMERGENCY TELEPHONE NUMBER:
1-800-424-9300

QUANTITY	MATERIAL NO	HM	DESCRIPTION	CLASS	ID	P.O.	HAERS	WEIGHT
130 Drums	120511		CHEMICALS, N.O.I. CYCLANILIDE FORM 1X50KG US (PRODUCED) Must be released lot numbers. 7811016 25 DRUMS 7811027 65 DRUMS 7811029 35 DRUMS 7811033 5 DRUMS ----- 130 TOTAL					14,330 LBS. NET
Sent 18678								

This is to certify that the above-named materials are properly classified, described, packaged, marked and labeled, and are in proper condition for transportation according to the applicable regulations of the Department of Transport.

TOTAL SHIPPING UNITS

PLACARDS SUPPLIED:
 YES NO-FURNISHED BY CARRIER
HAERS SUPPLIED:
 YES NO-FURNISHED BY CARRIER
 DRIVER'S SIGNATURE _____

TOTAL WEIGHT 16,900 LB

PLACARDS REQUIRED:

DECLARED VALUE OF SHIPMENT

Aventis
P.O. Box 12014
#2 T.W. Alexander Drive
Research Triangle Park, North Carolina 27709

G	AMOUNT
O	FEE
D	TOTAL

Date: 6-15-01Date: 6-15-01Shipper: Berni ForziCarrier: Jimmy Rain'sConsignee: Berni Forzi

STRAIGHT BILL OF LADING - SHORT FORM



Received, subject to all terms and conditions of the contract in effect between shipper and Carrier on the date of issue of this Bill of Lading, the property described below in apparent good order, carried as noted. In the event no contract is in effect, the Terms and Conditions of the Uniform Domestic Straight Bill of Lading as set forth in the appropriate rail or motor carrier tariffs shall apply.

CONSIGNEE:

AVENTIS CROPSCIENCE USA LP
C/O NEX WAREHOUSES
1821 FRONT AVE
BERKELEY MO 63104
USA

CONSIGNOR (SHIPPER):

Aventis CropScience USA LLP
c/o Cedar Chemical Corporation
49 Phillippe Road #311
Helena AR 72342
USA

BL NO.

80105394

Page: 1 of 1

Date: June 19, 2001

CARRIER: EMPIRE EXPRESS

VEHICLE NO.:

FREIGHT CHARGES: Prepaid

Carrier: Attach memorandum copy of Bill of Lading to Freight Bill and send to

AVENTIS CROPSCIENCE C/O FTS
C/O FTS FREIGHT PAYMENT PLAN
P. O. BOX 1259
SOMERVILLE NJ 08876-1259

24 HOUR EMERGENCY TELEPHONE NUMBER:

1 800 454 2100

SEAL NOS. _____

QUANTITY	HAZARD CLASS	DESCRIPTION	CLASS	ID	P.G.	HAERG	WEIGHT
130 130 units	1.0511	CHEMICALS, N.O.I. CYCLOANILIDE FDRM 1X50KG US (PRODUCED) Must be released lot numbers only. Must deliver on June 28th.					16,900 LB

This is to certify that the above-named materials are properly classified, described, packaged, marked and labeled, and are in proper condition for transportation according to the applicable regulations of the Department of Transportation.

TOTAL SHIPPING UNITS

PLACARDS REQUIRED:

HAERG VALUE FOR EQUIPMENT

PLACARDS SUPPLIED?

YES NO-FURNISHED BY CARRIER

HAERG SUPPLIED?

YES NO-FURNISHED BY CARRIER

DRIVER'S SIGNATURE _____

TOTAL WEIGHT

16,900 LB

Aventis
P.O. Box 12014
#2 T.W. Alexander Drive
Research Triangle Park, North Carolina 27709

C AMOUNT

D FEE

D TOTAL

Date: _____

Date: _____

Carrier: _____

Consignee: _____

STRAIGHT BILL OF LADING - SHORT FORM

Received, subject to all terms and conditions of the contract in effect between shipper and Carrier on the date of issue of this Bill of Lading, the property described below in apparent good order, (except as noted in the bill no contract is in effect, the Terms and Conditions of the Uniform Domestic Straight Bill of Lading as set forth in the appropriate rail or motor classification sheet apply.



CONSIGNEE:
AVENTIS CROPSCIENCE USA LP
C/O NSV WAREHOUSES
8921 FROST AVE
BERKELEY MO 63134
USA

CONSIGNOR (SHIPPER):
Aventis CropScience USA LLP
c/o Cedar Chemical Corporation
49 Phillips Road #311
Helena AR 72342
USA

B/L NO. 80105393
Page: 1 of 1
Date: June 19, 2001
CARRIER: EMPIRE EXPRESS
VEHICLE NO.:
FREIGHT CHARGES: Prepaid

Carrier: Attach memorandum copy of Bill of Lading to Freight Bill and send to:

AVENTIS CROPSCIENCE C/O FTS
C/O FTS FREIGHT PAYMENT PLAN
P. O. BOX 1259
SOMERVILLE NJ 08876-1259

TELEPHONE NUMBER:
1-800-424-9300

SEAL NOS.

QUANTITY	UNIT	DESCRIPTION	CLASS	ID	P.G.	NAERG	WEIGHT
.30 cubs	120311	CHEMICALS, N.O.I. CYCLANILIDE FORM 1X50KG US (PRODUCED) Must be released lot numbers only. Must deliver on June 28th.					16,900 LB

This is to certify that the above-named materials are properly classified, described, packaged, marked and labeled, and are in proper condition for transportation according to the applicable regulations of the Department of Transportation.

TOTAL SHIPPING UNITS

PLACARDS REQUIRED:
DECLARED VALUE OF SHIPMENT

PLACARDS SUPPLIED?
 YES NO-FURNISHED BY CARRIER
NAERG SUPPLIED?
 YES NO-FURNISHED BY CARRIER
DRIVER'S SIGNATURE _____

TOTAL WEIGHT

16,900 LB

Aventis
P.O. Box 12014
92 T.W. Alexander Drive
Research Triangle Park, North Carolina 27709

C	AMOUNT
O	FEE
D	TOTAL

Date: _____

Date: _____

Condit

Condit



12:14

KLING-TULLEN SUPPLY 731803123700

NO. 031 1004

STRAIGHT BILL OF LADING - SHORT FORM

Received subject to all terms and conditions of the contract in effect between shipper and carrier on the date of issue of the bill of lading. The provisions described below in separate good order, except as noted, in the event no contract is in effect, the terms and conditions of the Uniform Domestic Straight Bill of Lading as set forth in the appropriate rail or motor classification shall apply.

CONSIGNEE:

AVENTIS CROPSCIENCE USA LP
% WRIGHT DISTRIBUTION CENTER INC
 1-75 EXIT 122
 100 HANTHORN RD
 LIMA OH 45804
 USA

CONSIGNEE (SHIPPER):

Aventis CropScience USA LLP
 o/o Cedar Chemical Corporation
 49 Phillips Road #311
 Helena AR 72342
 USA

EA NO.

80098431

Page: 1 of 1

Date: **May 09, 2001**
 CARRIER: **AMERICAN FREIGHT**

VEHICLE NO.:**FREIGHT CHARGE:**

Prepaid

Carrier: Attach manufacturer copy of Bill of Lading to Freight Bill and send

24 HOUR EMERGENCY TELEPHONE NUMBER:

1-800-424-9300

SEAL NOS.

AVENTIS CROPSCIENCE C/O FTS
C/O FTS FREIGHT PAYMENT PLAN
 P. O. BOX 1259
 SOMERVILLE NJ 08876-1259

QUANTITY	MATERIAL NO.	UNIT	DESCRIPTION	CLASS	IQ	PK	WEIGHT
23 Drums	109671	X	DICHLORANILINE, SOLID RD(2,4-DICHLORANILINE) MARINE POLLUTANT INSECTICIDES OR FUNGICIDES, N.O.I., OTHER THAN POISON 2,4-DCA (2,4-DICHLORANILINE). 1x200kg net	6.1	UN1590	11	133
							10,141 LBS. 23 Drums

Driver signature acknowledges receipt of weight only
Terms & Conditions of ASPN Rules Part 125 apply

01447101-7



ARRIVE

09 25

DEPART

10 15



FCY

P5264

This is to certify that the above-named materials are properly classified, described, packaged, marked and labeled, and are in proper condition for transportation according to the applicable regulations of the Department of Transport

TOTAL SHIPPED UNITS

PLACARDS REQUIRED:

DECLARED VALUE OF SHIPMENT

PLACARDS SUPPLIED:

YES NO - FURNISHED BY CARRIER

MARKS SUPPLIED:

YES NO - FURNISHED BY CARRIER

DRIVER'S SIGNATURE _____

TOTAL WEIGHT

9,980 LB

Aventis
 P.O. Box 12014
 62 E.W. Alexander Drive
 Research Triangle Park, North Carolina 27709

0	AMOUNT
0	FEE
0	TOTAL

Date:

5-11-01
FFC plus slow 11/23/01 CAH
 Carrier: *Dr Lammitt 05-11-01*

Date:

5-11-01

Consignee:

Bennett
 AB0000028857



November 7, 2000

Re: Goods Receipt for Purchase Orders: Initial Screen

Attached is a revision for entering data in the **Bill of Lading** field of the referenced screen of SAP. The three fields Delivery Note, Bill of Lading, and Header Text creates freight payment authorizations for materials purchased on freight collect basis.

The revision reflects the length limitation of the bill of lading field entry. Although the field is big enough for 16 characters, a bill of lading number of only ten or fewer characters is recognized by SAP.

Please follow these instructions so that problems with freight bill payment for purchased materials can be held to a minimum. We have had major problems with some carriers threatening to place us on a cash basis.

Please call with questions.

Sincerely,

Glenn
Glenn E. Cannon
Transportation Department

AB0000028857

To: All Aventis CropScience personnel, warehouses and formulators / tollers who will be creating "Goods Receipt for Purchase Orders" in SAP

There are three fields in the Goods Receipt for Purchase Order: Initial Screen (copy attached) which have been designated for use to input important data to create freight payment authorizations for materials purchased on a freight collect basis.

These three fields are:

- 1) Delivery note
- 2) Bill of lading
- 3) Header text

Delivery note In this field enter the vehicle ID number (trailer number, rail car number or ocean container number) if known. If the vehicle ID number is not known enter "Not Known".

Bill of lading In this field enter one of the following (listed in order of preference):

- 1) Carrier pro number, freight bill number, waybill number or air bill number
- 2) Shipper's bill of lading number
- 3) **Ship Month + Ship Day + Vehicle Number** in the following format:

MMDD + Vehicle number

MM = is the two digit numeric ship month

DD = is the two digit ship day

Vehicle number = is the trailer number, rail car number or ocean container number

For a trailer – enter the complete trailer number

For a rail car or ocean container – enter the 1st alpha character + the numeric characters.

Example: Rail car RAIX32459 shipped April 3, 2000

Enter: 0403R32459

Note: If the entry in the bill of lading field exceeds 10 characters, drop sufficient characters from the end of the number to reduce the total length of the entry to 10 characters.

Enter the number without spaces, dashes or slashes. Do not add extra characters such as JB, Pro#, etc.

Header text: In this field enter the five digit origin postal zip code.

Section II.

Processing Steps

STEP #	Description	Comments
1	<p>Menu Path - <i>Logistics</i> → <i>Materials Management</i> → <i>Inventory Management</i>.</p> <p>Click on "For purchase order" button.</p> <p>Screen Name - Goods Receipt for Purchase Order: Initial Screen</p> <p><i>Enter the fields on the screen as follows:</i></p>	Transaction: MB01

Goods receipt Edit Goto Movement type Environment System Help

✓ [] ← ↕ × * ?

Copy + details WM parameters... Purchase orders... Copy Material document... PO unknown

Document date	<u>03/01/2000</u>	Posting date	<u>03/01/2000</u>
Delivery note	_____	Bill of lading	_____
Header text	_____	GR/GI slip no.	_____

Defaults for document items

Movement type	[] []
Purchase order	_____
Plant	_____
Storage location	_____

GR/GI slip

<input type="checkbox"/> Print	<input type="checkbox"/> Individual slip
	<input type="checkbox"/> Individ. slip w inspect text
	<input checked="" type="checkbox"/> Collective slip

Mandatory Fields

LWalker

From: <Craig.Dodson@aventis.com>
To: <lwalker@cvrtmail.com>
Cc: <jmancini@cvrtmail.com>
Sent: Friday, July 27, 2001 5:48 AM
Subject: RE: Total Cyclanilide Production
Lisa,

This is a little different than we discussed. Can you give me a call?

1. First production into SAP was for 60,850 kg (or 1,217 drums) in March.
2. Latest production into SAP was for 52,050 kg (or 1,041 drums) this month.

$$\begin{array}{r} 1820 \\ 304 \\ \hline 2124 \end{array}$$

$$1129001597$$

$$\begin{array}{r} 7 \\ 1217 \\ 1041 \\ \hline 2258 \end{array}$$

Thanks,
Craig

-----Original Message-----

From: Cedar Chemical Corporation
[mailto:jmancini@cvrtmail.com]
Sent: Thursday, July 26, 2001 4:44 PM
To: Dodson, Craig
Cc: 'jrone@cvrtmail.com'; 'lwalker@cvrtmail.com'
Subject: Total Cyclanilide Production

$$\begin{array}{r} 2258 \\ 2124 \\ \hline 134 \end{array}$$

$$67 \text{ Kgs}$$
~~12~~

Craig:

The official total amounted to 105,978 kgs and this is the amount that you will be invoiced for. The first invoice was for 60,873 kgs; ✓ the second one will be for 45,105 kgs.

Please let me know if you have any questions.

Joe M.

Date	B/L#	Ship to	Shipper	Product	Cont#	Qty	Misc
5/8/2001	4-21331	Aventis	American Freightway	Cyclanilide	P14810	110	Lot#7811018-1dr@110lbs
5/9/2001	80096435	Aventis	American Freightway	Cyclanilide		330	Lot#009,013 & 022 3@110lbs
5/11/2001	80096431	Aventis	American Freightway	2, 4 DCA		10,141	23drums@441lbs ea
5/21/2001	80096430	Aventis	Trans Carriers	2,4 DCA	758	42,840	72drums@270kgs-per drum
5/21/2001	80096429	Aventis	Trans Carriers	2,4 DCA	8068	42,840	72drums@270kgs-per drum
5/22/2001	80096428	Aventis	Trans Carriers	2,4 DCA	18658	40,480	68drums@270kgs
6/16/2001	80104459	Aventis	Empire Express	Cyclanilide	53397	14,330	130drs@110lbs ea
6/15/2001	80104460	Aventis	Empire Express	Cyclanilide	53498	14,330	130drs@110lbs ea
6/21/2001	80105390	Aventis	Empire Express	Cyclanilide	53430	14,300	130dr@110lbs
6/21/2001	80105389	Aventis	Empire Express	Cyclanilide	53402	14,300	130dr@110lbs
6/25/2001	80105392	Aventis	Empire Express	Cyclanilide	53407	14,330	130@110lbs ea
6/25/2001	80105391	Aventis	Empire Express	Cyclanilide	53338	14,330	130@110lbs ea
6/27/2001	80105393	Aventis	Empire Express	Cyclanilide	53576	14,300	130drs@110lbs ea
6/29/2001	80107047	Aventis	Empire Express	Cyclanilide		14,300	130drs@110lbs ea
7/18/2001	80105394	Aventis	Empire Express	Cyclanilide	18651	14,300	130drs@110lbs ea
7/18/2001	80109216	Aventis	Empire Express	Cyclanilide	18649	14,300	130drs@110lbs ea
7/23/2001	80110039	Aventis	Empire Express	Cyclanilide	53459	14,300	130drs@110lbs ea
7/23/2001	80110040	Aventis	Empire Express	Cyclanilide	53391	14,300	130drs@110lbs ea
7/25/2001	80110038	Aventis	Empire Express	Cyclanilide	53862	14,300	130drs@110lbs ea

Total: 978,081

200,640 LBS

have 304 drums-

185,900

200,200

2124 Drums

233,640

LWalker

From: <Craig.Dodson@aventis.com>
To: <lwalker@cvrtmail.com>
Sent: Monday, July 23, 2001 12:05 PM
Subject: Total Cyclanilide production
Lisa,

Need some help. Current production reported into SAP is 2048 drums or 102400 kgs. I was just copied on an e-mail from Joe Mancini that states the total run will be 108640 kgs. Can you confirm that? I would need to produce another 124.8 drums in SAP.

Thanks,
Craig

^{Aventis}
2048 x 110 = 225280

233,640

76 Drums

105,978 kgs

94

60873 invoice

July 26, 2001

Delivery: 80110886
Del. Created By: Craig Dodson
Route: 000032

Requested Date: August 01, 2001
Carrier: ROUTING GUIDE
Freight Charges: Prepaid

SHIP-TO: USC1
AVENTIS CROPSCIENCE USA LP
C/O COASTLAND WAREHOUSE COMPAN
126 COLEMAN BLVD PORT AUTHORIT
SAVANNAH GA 31408
USA

SHIP-FROM: USD7
Aventis CropScience
c/o Cedar Chemical Corporation
49 Phillips Road #311
Helena AR 72342
USA

Item	Material	Description	Quantity	UOM	Quantity picked	Weight	UOM
000001	120511	CYCLANILIDE FDRM 1X50KG US (PRODUCED) CHEMICALS, N.O.I.	130	DRM		16900	LB

Order#: 712147

Order Taken By: Craig Dodson

Picked by:

Total Shipping units:

Gross Weight 16900 LB
AB0000028857

July 26, 2001

Delivery: 80110887
Del. Created By: Craig Dodson
Route: 000033

Requested Date: August 01, 2001
Carrier: ROUTING GUIDE
Freight Charges: Prepaid

SHIP-TO: USB9
AVENTIS CROPSCIENCE USA LP
C/O NSY WAREHOUSES
8921 FROST AVE
BERKELEY MO 63134
USA

SHIP-FROM: USD7
Aventis CropScience
c/o Cedar Chemical Corporation
49 Phillips Road #311
Helena AR 72342
USA

Item	Material	Description	Quantity	UOM	Quantity picked	Weight	UOM
000001	120511	CYCLANILIDE FDRM 1X50KG US (PRODUCED) CHEMICALS, N.O.I.	130	DRM		16900	LB

Order#: 712148

Order Taken By: Craig Dodson

July 26, 2001

Delivery: 80110888
Del. Created By: Craig Dodson
Route: 000033

Requested Date: August 02, 2001
Carrier: ROUTING GUIDE
Freight Charges: Prepaid

SHIP-TO: USB9
AVENTIS CROPSCIENCE USA LP
C/O NSY WAREHOUSES
8921 FROST AVE
BERKELEY MO 63134
USA

SHIP-FROM: USD7
Aventis CropScience
c/o Cedar Chemical Corporation
49 Phillips Road #311
Helena AR 72342
USA

Item	Material	Description	Quantity	UOM	Quantity picked	Weight	UOM
000001	120511	CYCLANILIDE FDRM 1X50KG US (PRODUCED) CHEMICALS, N.O.I.	44	DRM		5720	LB

Order#: 712149

Order Taken By: Craig Dodson

July 16, 2001

Delivery: 80109215
Del. Created By: Craig Dodson
Route: 000033

Requested Date: July 17, 2001
Carrier: ROUTING GUIDE
Freight Charges: Prepaid

SHIP-TO: US82
AVENTIS CROPSCIENCE USA LP
133 E KRAUSS
ST LOUIS MO 63111
USA

SHIP-FROM: USD7
Aventis CropScience
c/o Cedar Chemical Corporation
49 Phillips Road #311
Helena AR 72342
USA

Item	Material	Description	Quantity	UOM	Quantity picked	Weight	UOM
000001	120511	CYCLANILIDE FDRM 1X50KG US (PRODUCED) CHEMICALS, N.O.I.	130	DRM		16900	LB

Order#: 711906

Order Taken By: Craig Dodson

Must be released lot numbers only. To deliver on Tuesday, July 17th.

Picked by:

Total Shipping units:

Gross Weight 16900 LB
AB0000028857

July 16, 2001

Delivery: 80109216
Del. Created By: Craig Dodson
Route: 000033

Requested Date: July 18, 2001
Carrier: ROUTING GUIDE
Freight Charges: Prepaid

SHIP-TO: USB9
AVENTIS CROPSCIENCE USA LP
C/O NSY WAREHOUSES
8821 FROST AVE
BERKELEY MO 63134
USA

SHIP-FROM: USD7
Aventis CropScience
c/o Cedar Chemical Corporation
49 Phillips Road #311
Helena AR 72342
USA

Item	Material	Description	Quantity	UOM	Quantity picked	Weight	UON
000001	120511	CYCLANILIDE FDRM 1X50KG US (PRODUCED) CHEMICALS, N.O.I.	130	DRM		16900	LB

Order#: 711907

Order Taken By: Craig Dodson

Must be released lot numbers only.

June 28, 2001

Delivery: 80107047
Del. Created By: Craig Dodson
Route: 000033

Requested Date: July 02, 2001
Carrier: ROUTING GUIDE
Freight Charges: Prepaid

SHIP-TO: US89
AVENTIS CROPSCIENCE USA LP
C/O NSY WAREHOUSES
8921 FROST AVE
BERKELEY MO 63134
USA

SHIP-FROM: USD7
Aventis CropScience
c/o Cedar Chemical Corporation
49 Phillips Road #311
Helena AR 72342
USA

Item	Material	Description	Quantity	UOM	Quantity picked	Weight	UOM
000001	120511	CYCLANILIDE FDRM 1X50KG US (PRODUCED) CHEMICALS, N.O.I.	130	DRM		16900	LB

Order#: 711596

Order Taken By: Craig Dodson

Must be released lot numbers only.

Picked by:

Total Shipping units:

Gross Weight 16900 LB
AB0000028857

June 19, 2001

Delivery: 80105393
Del. Created By: Craig Dodson
Route: 000033

Requested Date: June 28, 2001
Carrier: ROUTING GUIDE
Freight Charges: Prepaid

SHIP-TO: USB9
AVENTIS CROPSCIENCE USA LP
C/O NSY WAREHOUSES
8921 FROST AVE
BERKELEY MO 63134
USA

SHIP-FROM: USD7
Aventis CropScience
c/o Cedar Chemical Corporation
49 Phillips Road #311
Helena AR 72342
USA

Item	Material	Description	Quantity	UOM	Quantity picked	Weight	UOM
000001	120511	CYCLANILIDE FDRM CHEMICALS, N.O.I.	130	DRM		16900	LB

Order#: 711434

Order Taken By: Craig Dodson

Must be released lot numbers only. Must deliver on June 28th.

Picked by:

Total Shipping units:

Gross Weight 16900 LB
AB0000028857

June 19, 2001

Delivery: 80105394
Del. Created By: Craig Dodson
Route: 000033

Requested Date: June 28, 2001
Carrier: ROUTING GUIDE
Freight Charges: Prepaid

SHIP-TO: USB9
AVENTIS CROPSCIENCE USA LP
C/O NSY WAREHOUSES
8921 FROST AVE
BERKELEY MO 63134
USA

SHIP-FROM: USD7
Aventis CropScience
c/o Cedar Chemical Corporation
49 Phillips Road #311
Helena AR 72342
USA

Item	Material	Description	Quantity	UOM	Quantity picked	Weight	UOM
000001	120511	CYCLANILIDE FDRM 1X50KG US (PRODUCED) CHEMICALS, N.O.I.	130	DRM		16900	LB

Order#: 711435

Order Taken By: Craig Dodson

Must be released lot numbers only. Must deliver on June 28th.

Picked by:

Total Shipping units:

Gross Weight

16900 LB
AB0000028857

June 19, 2001

Delivery: 80105389
Del. Created By: Craig Dodson
Route: 000033

Requested Date: June 22, 2001
Carrier: ROUTING GUIDE
Freight Charges: Prepaid

SHIP-TO: USB9
AVENTIS CROPSCIENCE USA LP
C/O NSY WAREHOUSES
8921 FROST AVE
BERKELEY MO 63134
USA

SHIP-FROM: USD7
Aventis CropScience
c/o Cedar Chemical Corporation
49 Phillips Road #311
Helena AR 72342
USA

Item	Material	Description	Quantity	UOM	Quantity picked	Weight	UOM
000001	120511	CYCLANILIDE FDRM CHEMICALS, N.O.I.	1X50KG US (PRODUCED)	130	DRM	16900	LB

Order#: 711430

Order Taken By: Craig Dodson

Must be released lot numbers only. Must deliver on June 22nd.

June 19, 2001

Delivery: 80105390
Del. Created By: Craig Dodson
Route: 000033

Requested Date: June 22, 2001
Carrier: ROUTING GUIDE
Freight Charges: Prepaid

SHIP-TO: USB9
AVENTIS CROPSCIENCE USA LP
C/O NSY WAREHOUSES
8921 FROST AVE
BERKELEY MO 63134
USA

SHIP-FROM: USD7
Aventis CropScience
c/o Cedar Chemical Corporation
49 Phillips Road #311
Helena AR 72342
USA

Item	Material	Description	Quantity	UOM	Quantity picked	Weight	UOM
000001	120511	CYCLANILIDE FDRM 1X50KG US (PRODUCED) CHEMICALS, N.O.I.	130	DRM	_____	16900	LB

Order#: 711431

Order Taken By: Craig Dodson

Must be released lot numbers only. Must deliver on June 22nd.

Picked by:

Total Shipping units:

Gross Weight 16900 LB
AB0000028857

June 19, 2001

Delivery: 80105392
Del. Created By: Craig Dodson
Route: 000033

Requested Date: June 26, 2001
Carrier: ROUTING GUIDE
Freight Charges: Prepaid

SHIP-TO: USB9
AVENTIS CROPSCIENCE USA LP
C/O NSY WAREHOUSES
8921 FROST AVE
BERKELEY MO 63134
USA

SHIP-FROM: USD7
Aventis CropScience
c/o Cedar Chemical Corporation
49 Phillips Road #311
Helena AR 72342
USA

Item	Material	Description	Quantity	UOM	Quantity picked	Weight	UOM
000001	120511	CYCLANILIDE FDRM 1X50KG US (PRODUCED) CHEMICALS, N.O.I.	130	DRM		16900	LB

Order#: 711433

Order Taken By: Craig Dodson

Must be released lot numbers only. Must deliver on June 26th.

Picked by:

Total Shipping units:

Gross Weight 16900 LB
AB0000028857

June 19, 2001

Delivery: 80105391
Del. Created By: Craig Dodson
Route: 000033

Requested Date: June 26, 2001
Carrier: ROUTING GUIDE
Freight Charges: Prepaid

SHIP-TO: USB9
AVENTIS CROPSCIENCE USA LP
C/O NSY WAREHOUSES
8921 FROST AVE
BERKELEY MO 63134
USA

SHIP-FROM: USD7
Aventis CropScience
c/o Cedar Chemical Corporation
49 Phillips Road #311
Helena AR 72342
USA

Item	Material	Description	Quantity	UOM	Quantity picked	Weight	UOM
000001	120511	CYCLANILIDE FDRM 1X50KG US (PRODUCED) CHEMICALS, N.O.I.	130	DRM		16900	LB

Order#: 711432

Order Taken By: Craig Dodson

Must be released lot numbers only. Must deliver on June 26th.



delivering new solutions

round 1

29 = 7 -	35
27 = 13	65
16 = 5	25
33 = 1	5
<hr/>	
26	130

20 = 6	
14 = 6	
28 = 11	
20/14 = 1	2/3
14/28 = 1	1/4
29/16 = 1	4/1
<hr/>	
26	

20 = 32	
14 = 34	
28 = 59	
29 = 4	
16 = 1	
<hr/>	
130	

800-235-5569

www.odfl.com

7811020 =

~~32~~ 32 ⁶ 2

7811014 =

34 ⁶ 4 } 2

7811028 =

59 11 4 } 2

7811029 =

39 ⁷ 1

781016 =

26 ⁵ 1

781027 =

~~45~~ 45 ¹³

7811033 =

~~5~~ 5 ¹

Batch Pallets

20 - 6

14 - 6

28 - 11

29 - 7

16 - 5

27 - 13

33 - 51

260

Batch

20/14 2/3 = 1

14/28 1/4 = 1

29/16 4/1 = 1

26 pallets

26
54
5
26

June 14, 2001

Delivery: 80104459
Del. Created By: Craig Dodson
Route: 000033

Requested Date: June 18, 2001
Carrier: ROUTING GUIDE
Freight Charges: Prepaid

SHIP-TO: US82
AVENTIS CROPSCIENCE USA LP
133 E KRAUSS
ST LOUIS MO 63111
USA

SHIP-FROM: USD7
Aventis CropScience
o/o Cedar Chemical Corporation
49 Phillips Road #311
Helena AR 72342
USA

Item	Material	Description	Quantity	UOM	Quantity picked	Weight	UOM
000001	120811	CYCLANILIDE FDRM 1X50KG US (PRODUCED) CHEMICALS, N.O.I.	130	DRM		16900	LB

Order#: 711333

Order Taken By: Craig Dodson

Must be released lot numbers.

7811016	25 DRUMS	14,330 LBS. NET
7811027	65 DRUMS	
7811029	35 DRUMS	
7811033	5 DRUMS	

130 TOTAL		

June 14, 2001

Delivery: 80104460
Del. Created By: Craig Dodson
Route: 000033

Requested Date: June 18, 2001
Carrier: ROUTING GUIDE
Freight Charges: Prepaid

SHIP-TO: US82
AVENTIS CROPSCIENCE USA LP
133 E KRAUSS
ST LOUIS MO 63111
USA

SHIP-FROM: USD7
Aventis CropScience
c/o Cedar Chemical Corporation
49 Phillips Road #311
Helena AR 72342
USA

Item	Material	Description	Quantity	UOM	Quantity picked	Weight	UOM
000001	120511	CYCLANILIDE FDRM 1X50KG US (PRODUCED) CHEMICALS, N.O.I.	130	DRM		16900	LB

Order#: 711334

Order Taken By: Craig Dodson

Must be released lot numbers.

7811014	34 DRUMS	14,330 LBS. NET
7811016	1 DRUM	
7811020	32 DRUMS	
7811028	59 DRUMS	
7811029	4 DRUMS	

130 TOTAL		

LWalker

From: "Cedar Chemical Corporation" <jmancini@cvrtmail.com>
To: <lwalker@cvrtmail.com>; <bcummings@cvrtmail.com>
Sent: Monday, March 26, 2001 3:12 PM
Subject: FW: Needs for Cyclanillide
Lisa/Bobbi:

FYI. See below.

Joe M.

-----Original Message-----

From: Cedar Chemical Corporation [SMTP:jmancini@cvrtmail.com]
Sent: Monday, March 26, 2001 4:06 PM
To: 'krusling@cvrtmail.com'; 'mcgee@cvrtmail.com'; 'jrone@cvrtmail.com';
'nrobbins@cvrtmail.com'; 'gregs@cvrtmail.com'; 'rtomblin@cvrtmail.com'
Subject: FW: Needs for Cyclanillide

-----Original Message-----

From: Dan.Stahl@aventis.com [SMTP:Dan.Stahl@aventis.com]
Sent: Monday, March 26, 2001 3:02 PM
To: jmancini@CVRTMAIL.COM
Cc: Serge.Ravet@aventis.com; Craig.Dodson@aventis.com;
Dave.Linhardt@aventis.com; Larry.Spicer@aventis.com
Subject: FW: Needs for Cyclanillide

Joe-

To All:

See below.

Aventis has agreed to pay for the first 60 MT of Cyclanillide. Please ensure that we provide each requested item of paperwork. Please call me if you have any questions.

Joe M.

We are ready to proceed on the first 60MT order from you all. Here is what we need to get in place to finalize:

5/9/2001

AB0000028857



STRAIGHT BILL OF LADING - SHORT FORM

Received, subject to all terms and conditions of the contract in effect between shipper and Carrier on the date of issue of this Bill of Lading, the property described below in agreement with order, except as noted, is the actual receipt to in effect, the terms and conditions of the Uniform Customs and Practice for Documentary Credits as set forth in the appropriate rule or other classification shall apply.

SHIPPER:

CONSIGNEE (SHIPPER):

BL NO.

AVENTIS CROPSCIENCE USA LP
% WRIGHT DISTRIBUTION CENTER INC
1-75 EXIT 122
1000 HANTHORN RD
LIMA OH 45804
USA

Aventis CropScience USA LLP
c/o Cedar Chemical Corporation
49 Phillips Road #311
Helena AR 72342
USA

80098429
Page: 1 of 1
Date: **May 09, 2001**
CARRIER: **ATS INC**
VEHICLE NO.:
FREIGHT CHARGES: **Prepaid**

Carrier: Attach memorandum copy of Bill of Lading to Freight Bill and send

24 HOUR EMERGENCY TELEPHONE NUMBER:
1-800-424-9300

SEAL NOS. _____

AVENTIS CROPSCIENCE C/O FTS
C/O FTS FREIGHT PAYMENT PLAN
P. O. BOX 1259
SOMERVILLE NJ 08876-1259

QUANTITY	MATERIAL NO	PKG	DESCRIPTION	CLASS	TD	P.C.	NET WT	WEIGHT
72 Drums	109671	X	DICHLORDANILINE, SOLID RD(2,4-DICHLORDANILINE) MARINE POLLUTANT INSECTICIDES OR FUNGICIDES, N.O.I., OTHER THAN POISON 2,4-DCA (2,4-DICHLORDANILINE) 1x200kg. net	6.1	LN1590	11	153	31,746 LBS.

This is to certify that the above-named materials are properly classified, described, packaged, marked and labeled, and are in proper condition for transportation according to the applicable regulations of the Department of Transport

TOTAL SHIPPING UNITS

PLACARDS REQUIRED:

DECLARED VALUE OF SHIPMENT

PLACARDS SUPPLIED?
 YES NO-FURNISHED BY CARRIER
HAZARD SUPPLIED?
 YES NO-FURNISHED BY CARRIER
 DRIVER'S SIGNATURE _____

TOTAL WEIGHT
18,720 LB

Aventis
P.O. Box 12014
#2 T.M. Alexander Drive
Research Triangle Park, North Carolina 27709

AMOUNT
 FEE
 TOTAL

Shipper: _____ Carrier: _____ Consignee: _____

- * Craig Dodson has listed below our needs in order to do the reconciliation, we need your help with these documents
- * The price agreed to is \$9.46/kg, the affluent issues will be handled when we do the overall reconciliation as we previously discussed
- * Larry Spicer is providing to Gregg Satterfield the details on our analytical results, all batches for this first 60MT must be in spec and we must have a certificate with each batch
- * This invoice and all future invoices should go to Dave Linhardt here at the RTP, NC Aventis address, I would appreciate a fax copy on the initial invoices as well

I think this wraps up all the issues. Please let me know of questions.
Thanks for your help!

Dan Stahl
Aventis Industrial Strategy
Phone: 919.549.2195
Fax: 919.549.2003
Mobile: 919.599.1525
E-mail: Dan.Stahl@aventis.com

> -----Original Message-----

- > From: Dodson, Craig
- > Sent: Monday, March 26, 2001 9:19 AM
- > To: Stahl, Dan
- > Cc: Linhardt, Dave
- > Subject: Needs for Cyclanilide
- >
- > Dan,
- >
- > Here is what I need from Cedar and CreaNova to complete the reconciliation:
- >
- > 1. I need all receivers from the fall and spring campaign from Cedar.
- > This should include Sod Meth, 2,4-DCA, CDM, drums and labels. I would like to propose that in the future Cedar send receivers to me within 2 business days after material arrives. I would propose to FedEx receivers since they are hard to read from a fax copy.
- > 2. I need all production and consumption from fall and spring campaign in an excel spreadsheet.
- > 3. I would like to have an end of run physical inventory count on all items used in the production of Cyclanilide.
- > 4. I would like to request all shipments/proof of deliveries from CreaNova so I can match to Cedar's receivers.
- >
- > That should do it.

2,258. x
50.=
112,900.*

1,824.*+
2,253. -
431. *

1,824.*+
304. +
2,128. *

2,128.*+
2,253. -
130. *

0. *

17.*+
17. *

17. x
130.=
2,210.*

<i>Date</i>	<i>B/L#</i>	<i>Ship to</i>	<i>Shipper</i>	<i>Product</i>	<i>Cont#</i>	<i>Qty</i>	<i>Misc</i>
5/8/2001	4-21331 ✓	Aventis	American Freightway	Cyclanilide	P14810	110	Lot#7811018-1dr@110lbs
5/9/2001	80098435 ✓	Aventis	American Freightway	Cyclanilide		330	Lot#009,013 & 022 3@110lbs
5/11/2001	80096431	Aventis	American Freightway	2, 4 DCA		10,141	23drums@441lbs ea
5/21/2001	80096430	Aventis	Trans Carriers	2,4 DCA	756	42,840	72drums@270kgs-per drum
5/21/2001	80096429	Aventis	Trans Carriers	2,4 DCA	6066	42,840	72drums@270kgs-per drum
5/22/2001	80096428	Aventis	Trans Carriers	2,4 DCA	18658	40,480	68drums@270kgs-per drum
6/15/2001	80104460	Aventis	Empire Express	Cyclanilide	53498	14,300	130drs@110lbs ea
6/15/2001	80104459	Aventis	Empire Express	Cyclanilide	53397	14,300	130drs@110lbs ea
6/21/2001	80105389 ✓	Aventis	Empire Express	Cyclanilide	53402	14,300	130drs@110lbs ea
6/21/2001	80105390 ✓	Aventis	Empire Express	Cyclanilide	53430	14,300	130drs@110lbs ea
6/25/2001	80105392	Aventis	Empire Express	Cyclanilide	53407	14,300	130drs@110lbs ea
6/25/2001	80105391 ✓	Aventis	Empire Express	Cyclanilide	53338	14,300	130drs@110lbs ea
6/27/2001	80105393 ✓	Aventis	Empire Express	Cyclanilide	53576	14,300	130drs@110lbs ea
6/29/2001	80107047 ✓	Aventis	Empire Express	Cyclanilide		14,300	130drs@110lbs ea
7/18/2001	80109216 ✓	Aventis	Empire Express	Cyclanilide	18649	14,300	130drs@110lbs ea
7/18/2001	80105394 ✓	Aventis	Empire Express	Cyclanilide	18651	14,300	130drs@110lbs ea
7/23/2001	80110040 ✓	Aventis	Empire Express	Cyclanilide	53391	14,300	130drs@110lbs ea
7/23/2001	80110039 ✓	Aventis	Empire Express	Cyclanilide	53458	14,300	130drs@110lbs ea
7/25/2001	80110038 ✓	Aventis	Empire Express	Cyclanilide	53662	14,300	130drs@110lbs ea
7/28/2001	80110037 ✓	Aventis	Empire Express	Cyclanilide	53413	14,300	130drs@110lbs ea
7/30/2001	80110887 ✓	Aventis	Empire Express	Cyclanilide	53339	14,300	130drs@110lbs ea
7/30/2001	80110888 ✓	Aventis	Empire Express	Cyclanilide	53425	14,300	130drs@110lbs ea
7/31/2001	80110888 ✓	Aventis	Empire Express	Cyclanilide	53645	14,300	130drs@110lbs ea

81069215 7/16

<i>Date</i>	<i>B/L#</i>	<i>Ship to</i>	<i>Shipper</i>	<i>Product</i>	<i>Cont#</i>	<i>Qty</i>	<i>Misc</i>
						Total:	1,035,161

COPY 2

Chemical	Supplier Name	City	State	Spec #
2,4 DCA, CYC	VARIOUS			910200
Test Method	Type	Low	High	Description
2,4 DCA% COA		99.0000	100.0000	

Chemical	Supplier Name	City	State	Spec #
ACETIC ACID				910194
Chemical	Supplier Name	City	State	Spec #
ACETIC ACID	A AND W AMERICAS	CHARLESTON	SC	910058
Test Method	Type	Low	High	Description
ACETIC % COA		96.5000	100.0000	ACETIC % 96.5 min

Chemical	Supplier Name	City	State	Spec #
ACETIC ANHYD	EASTMAN CHEMICAL CO.	KINGSPORT	TN	910090
Test Method	Type	Low	High	Description
ANHYD % COA		99.5000	100.0000	99.5% min

Chemical	Supplier Name	City	State	Spec #
ACETIC ANHYD	HOECHST-CELANESE	PAMPA	TX	910034
Test Method	Type	Low	High	Description
ANHYD % COA		99.5000	100.0000	ANHYDRIDE %99.5 min

Chemical	Supplier Name	City	State	Spec #
ACETIC TRUCK	CONE SOLVENTS	MEMPHIS	TN	910108
Test Method	Type	Low	High	Description
%PURITY coa		99.8500	100.0000	purity
ACETIC % COA		95.0000	99.9000	95-99.9%active

Chemical	Supplier Name	City	State	Spec #
ACETIC\FMC	CONE SOLVENTS	MEMPHIS	TN	910136
Test Method	Type	Low	High	Description
% ACTIVE COA		95.0000	99.9000	% acetic acid active
%PURITY coa		99.8500	100.0000	purity for glacial acetic acid

Chemical	Supplier Name	City	State	Spec #
ACETONE	JLM INDUSTRIES	MT VERNON, INDIANA	IN	910057
Test Method	Type	Low	High	Description
WATER % COA		0.0100	0.3000	0.3% water max

Chemical	Supplier Name	City	State	Spec #
ACETONE	IDEAL	MEMPHIS	TN	910056
Test Method	Type	Low	High	Description
WATER % COA	N	0.0100	0.3000	WATER IN ACETONE 0.3% max

APPROVED
 SEP 12 2001
 BY: *AS Pechura*

Chemical	Supplier Name	City	State	Spec #	
AGENT 1568-6	STEPAN	WINDER	GA	910064	
Test	Method	Type	Low	High	Description
PERFORMN	PROP-7		1.0000	3.0000	1 = fail, 2 = pass
WATER %	GAM-2		0.0100	2.0000	.

Chemical	Supplier Name	City	State	Spec #	
AGNT X205615	STEPAN	WINDER	GA	910103	
Test	Method	Type	Low	High	Description
PERMFORN	PROP-7		1.0000	3.0000	PROPANIL EMULSION PERFORMANCE 1 = fail, 2 = pass
WATER %	GAM-2		0.0100	2.0000	.

Chemical	Supplier Name	City	State	Spec #	
ALUM SULFATE	CONE SOLVENTS	MEMPHIS	TN	910133	
Test	Method	Type	Low	High	Description
WT % ALM COA			48.0000	52.0000	.
Chemical	Supplier Name	City	State	Spec #	
ANHYD. HCL	VARIOUS			910094	
Test	Method	Type	Low	High	Description
%HCL-ANH from COA			99.0000	100.0000	% anhydrous HCL 99% min
Chemical	Supplier Name	City	State	Spec #	
AU-522	ADJU. UNLLIM .3LB EMULS.	TULSA	OK	910043	
Test	Method	Type	Low	High	Description
PERFORMN WATER %	PROP-7 GAM-2		1.0000 0.0100	3.0000 2.0000	1 = fail, 2 = pass.
Chemical	Supplier Name	City	State	Spec #	
3 AROMATICS	BASIS PETROLEUM	HOUSTON	TX	910021	
Test	Method	Type	Low	High	Description
B AROMAT COA			1.0000	3.0000	1 = not B grade, 2 = is B grade
Chemical	Supplier Name	City	State	Spec #	
3 AROMATICS	PHIBRO	HOUSTON	TX	910055	
Test	Method	Type	Low	High	Description
B AROMAT COA			1.0000	3.0000	1 = not B grade, 2 = is B grade
Chemical	Supplier Name	City	State	Spec #	
3-ODCB				910004	
Test	Method	Type	Low	High	Description
%ODCB	na		98.0000	100.0000	Bayer ODCB 98.5%min odcb, 1% max pdcb
%PDCB	na		0.0010	2.0000	para
Chemical	Supplier Name	City	State	Spec #	
3HT	VARIOUS			910126	
Test	Method	Type	Low	High	Description
ASH	COA		0.0001	0.0020	ASH = 0.002 MAX, 2,6DI-TERT-BUTYL-PARA-CRESOL = BHT
COLOR	COA		0.0010	5.0000	APHA COLOR OF 10% SOLUTION = 5MAX
FREEZ PT	COA		0.0010	69.3000	69.2 C MINIMUM FREEZE POINT
MOISTURE	COA		0.0001	0.0500	0.05% MAX MOISTURE
PURITY	COA		99.0000	100.0000	2,6-DITERT-BUTYL PARA-CRESOL = BHT
Chemical	Supplier Name	City	State	Spec #	
3BROMINE	VARIOUS			910183	

Test	Method	Type	Low	High	Description
BROMIN %	COA		99.9000	100.0000	.

Chemical	Supplier Name	City	State	Spec #
BUTYL ALCOHL	SHELL CHEMICAL CO	DEER PARK	TX	910060

Test	Method	Type	Low	High	Description
BUTYL %	COA		99.0000	100.0000	99%min.

Chemical	Supplier Name	City	State	Spec #
C-5643 EMULS	WITCO	MEMPHIS	TX	910205

Test	Method	Type	Low	High	Description
EMULS	COA		1.0000	2.0000	.
WATER %	COA		0.0100	1.0000	.

Chemical	Supplier Name	City	State	Spec #
2ALC CHLORID	TETRA CHEMICALS	WEST MEMPHIS	AR	910062
Test Method	Type	Low	High	Description
NO SPEC.	no specs	1.0000	3.0000	no specification required - 1=we reject, 2 = we accept.

Chemical	Supplier Name	City	State	Spec #
2ALCCHLR-FMC	VARIOUS			910154
Test Method	Type	Low	High	Description
CACL2 %	coa	34.0000	38.0000	.

Chemical	Supplier Name	City	State	Spec #
2ATALYST-DCA	JOHNSON MATTHEY	WEST DEPTFORD	NJ	910167
Test Method	Type	Low	High	Description
ACTIVITY R&D		6.0000	12.0000	.

Chemical	Supplier Name	City	State	Spec #
2ATALYST-CYMP	VARIOUS			910151
Test Method	Type	Low	High	Description
PALLADIM COA	G	5.0000	0.0000	.

Chemical	Supplier Name	City	State	Spec #
2AUSTIC\FMC	CHEMTECH.	MEMPHIS	TN	910134
Test Method	Type	Low	High	Description
% NAOH	COA	49.0000	51.0000	.

Chemical	Supplier Name	City	State	Spec #
2HLORINE\FMC	IDEAL	MEMPHIS	TN	910135
Test Method	Type	Low	High	Description
CHLORINE COA		99.5000	100.0000	%chlorine

Chemical	Supplier Name	City	State	Spec #
2PDM-CYCLAN	CREANOVA			910199
Test Method	Type	Low	High	Description
DIMM %	COA	L	1.0000	1.0000 .
DMF %	COA	L	0.7500	0.7500 .
PURITY %	COA	G	97.5000	0.0000 .

Chemical	Supplier Name	City	State	Spec #
2YCLOHEXANE				910187

Chemical	Supplier Name	City	State	Spec #
2YCLOHEXANE	CONE SOLVENTS	MEMPHIS	TN	910174
Test Method	Type	Low	High	Description
% H2O	COA	0.0100	0.1000	.

Chemical	Supplier Name		City		State	Spec #
DCA	BAYER PRODUCTS		PITTSBURGH		PA	910127
Test	Method	Type	Low	High	Description	
% DCA	COA		98.0000	100.0000	% DCA	
H2O PPM	COA		0.0001	500.0000	Water in DCA	

Chemical	Supplier Name		City		State	Spec #
DCA	TOLOCHIMIE		TOULOUSE			910146
Test	Method	Type	Low	High	Description	
DCA %	COA		98.0000	100.0000	.	
WATERPPM	COA		10.0000	1000.0000	.	

Chemical	Supplier Name	City	State	Spec #	
CA RM-PROCH	PROCHROM INC.	SALVADOR-BAHTI		910104	
Test	Method	Type	Low	High	Description
COA	COA		98.0000	100.0000	98%min., 500 ppm water max

Chemical	Supplier Name	City	State	Spec #	
CP-DOVER	SCHNECTADY CHEMICAL			910163	
Test	Method	Type	Low	High	Description
ASSAY %	COA		95.0000	100.0000	.
H2O PPM	COA		0.0100	200.0000	.

Chemical	Supplier Name	City	State	Spec #	
CPD	BF GOODRICH	CALVERT CITY	KY	910125	
Test	Method	Type	Low	High	Description
C10, ACET	COA		0.0025	0.0055	C10%
DCPD %	COA	G	99.0000	100.0000	% DCPD
OXY'S	COA	L	0.0001	0.0025	0.0025% MAX
WATER	COA		0.0001	100.0000	100 PPM WATER MAX

Chemical	Supplier Name	City	State	Spec #	
CPD	KMTEX	PORT ARTHUR	TX	910045	
Test	Method	Type	Low	High	Description
C10 ACET	COA		0.0025	0.0055	C10 %
DCPD %	COA	G	99.0000	100.0000	99%min
OXYS	COA	L	0.0001	0.0025	0.0025%MAX
WATER	COA		0.0001	100.0000	100 PPM MAX WATER

Chemical	Supplier Name	City	State	Spec #	
CPD	VARIOUS			910165	
Test	Method	Type	Low	High	Description
C10	COA		0.0025	0.0055	C10 ACETYLENES
DCPD	COA		99.0000	100.0000	%DCPD 99.0%MIN
OXY	COA		0.0001	0.0025	OXY 0.0025% MAX
WATER	COA		0.0001	100.0000	WATER 100 PPM MAX

Chemical	Supplier Name	City	State	Spec #	
CPI	TOLOCHIMIE	TOULOUSE		910031	
Test	Method	Type	Low	High	Description
DCPI %	COA		98.0000	100.0000	98%min

Chemical	Supplier Name	City	State	Spec #	
CPI, PPG	PPG INDUSTRIES	NATRIUM	WV	910202	
Test	Method	Type	Low	High	Description

2,3 DCPI COA	0.0100	0.9000 .
DCPI, % COA	98.7000	100.0000 .

Chemical	Supplier Name	City	State	Spec #	
DEAC	VARIOUS			910123	
Test	Method	Type	Low	High	Description
ALUMINUM	COA		21.9000	22.4000	DIETHYLALUMINUM CHLORIDE = DEAC
APPEAR	COA		0.0001	100.0000	TYPICAL, TYPICAL = 100
CHLORIDE	COA		29.2000	29.7000	CHLORIDE
CL/AL	COA		1.0000	1.0300	MOLAR RATIO
ETHANE	COA		98.0000	100.0000	ETHANE MOLAR%
HYDROGEN	COA		0.0001	0.2000	HYDROGEN MOLEAR% 0.2 MAX
IBUTANE	COA		0.0001	0.2000	IBUTANE MOLAR % 0.2MAX
NBUTANE	COA		0.0001	2.0000	2 % MAX NBUTANE MOLAR %

Chemical	Supplier Name	City	State	Spec #
DICNIL-CYMP	VARIOUS			910153
Test Method Type	Low	High	Description	
DICNIL % COA	0.0100	100.0000	.	
Chemical	Supplier Name	City	State	Spec #
DIENE RUBBER	FIRESTONE	LAKE CHARLES	LA	910189
Test Method Type	Low	High	Description	
DIENE COA	1.1000	2.0000	BFG PREAPPROVES THIS MATERIAL.	
Chemical	Supplier Name	City	State	Spec #
DMA	AIR PRODUCTS	DECATUR	AL	910068
Test Method Type	Low	High	Description	
%DMA COA	99.0000	100.0000	DMA 99%min	
Chemical	Supplier Name	City	State	Spec #
DMA	AIR PRODUCTS.	LEHIGH VALLEY	PA	910069
Test Method Type	Low	High	Description	
% DMA COA	99.0000	100.0000	dma 99% min	
Chemical	Supplier Name	City	State	Spec #
DMA	ACCRON	SPRING	TX	910210
Test Method Type	Low	High	Description	
DMA% COA	99.0000	100.0000	.	
Chemical	Supplier Name	City	State	Spec #
DMA	SHELL CHEMICAL CO	DEER PARK	TX	910207
Chemical	Supplier Name	City	State	Spec #
MF	AIR PRODUCTS	DECATUR	AL	910033
Test Method Type	Low	High	Description	
DMF % COA	99.9000	100.0000	99.9% min, 500ppm water max	
WATER % COA	0.0100	0.0500	.	
Chemical	Supplier Name	City	State	Spec #
DPO-PENTABRM	DOW CHEMICAL	FREEPORT	TX	910179
Test Method Type	Low	High	Description	
DPO % COA	99.0000	100.0000	DPO %	
Chemical	Supplier Name	City	State	Spec #
EDC	OCCIDENTAL CHEMICAL	BAYPORT	TX	910087
Test Method Type	Low	High	Description	
EDC % COA	99.9400	100.0000	99.95% min	

Chemical	Supplier Name	City	State	Spec #	
DC	VARIOUS			910114	
Test	Method	Type	Low	High	Description
%EDC	COA		99.9400	100.0000	EDC raw material for TA production

Chemical	Supplier Name	City	State	Spec #	
MULS-MOLNTE	WITCO	MEMPHIS	TX	910177	
Test	Method	Type	Low	High	Description
PERFORM	DICK FRA		0.0100	2.0000	.

Chemical	Supplier Name	City	State	Spec #	
PAC	VARIOUS			910120	
Test	Method	Type	Low	High	Description
BFG OK'D	none		1.0000	3.0000	1 = no / 2 = yes bfg approved

Chemical	Supplier Name	City	State	Spec #	
STHANOX 330	VARIOUS			910102	
Test	Method	Type	Low	High	Description
APPEAR	COA		10.0000	101.0000	APPEARANCE = WHITE TO LIGHT STRAW CRYSTALS, 100 = YES
PURITY	COA		98.0000	100.0000	%PURITY
SETPOINT	COA		154.0000	2000.0000	154 MIN.

Chemical	Supplier Name	City	State	Spec #	
ETHYLENE OXD	VARIOUS			910093	
Test	Method	Type	Low	High	Description
%E.O.	from COA		99.5000	100.0000	99.5% min Ethylene Oxide, 300 PPM max water
%WATER	from COA		0.0100	0.0300	%moisture in EO

Chemical	Supplier Name	City	State	Spec #	
ERRIC CHLRD	VARIOUS			910182	
Test	Method	Type	Low	High	Description
FECL %	COA		96.0000	100.0000	.
FERUS CL	COA		0.0100	3.0000	.
IMPURS %	COA		0.0100	1.0000	.

Chemical	Supplier Name	City	State	Spec #	
MC STEP 4	FMC CORP APG	BALTIMORE	MD	910129	
Test	Method	Type	Low	High	Description
STEP 4	COA	N	0.0000	2.0000	CUSTOMER APPROVED PRODUCT =2, 1= NOT APPROVED

Chemical	Supplier Name	City	State	Spec #
MC-80-1				910149

Chemical	Supplier Name	City	State	Spec #
ORMALDEHYDE	DYNEA			910211

Test	Method	Type	Low	High	Description
FORM %	coa		44.5000	45.5000	.
MEOH, %	COA		4.5000	6.0000	.

Chemical	Supplier Name	City	State	Spec #
ORMALDEHYDE	NESTE RESINS	WINNFIELD	LA	910191

Test	Method	Type	Low	High	Description
FORM %	COA		44.5000	45.5000	FORMALDEHYDE
MEOH %	COA		4.5000	6.0000	.

Chemical	Supplier Name	City	State	Spec #
ORMALDEHYDE	GEORGIA PACIFIC	TAYLORSVILLE, MS	MS	910066

Test	Method	Type	Low	High	Description
FORM %	COA		44.5000	45.5000	44.5 - 45.5% formaldehyde / 4.5-6% Meoh

MEOH, % COA 4.5000 6.0000 .

Chemical	Supplier Name	City	State	Spec #
FORMALDEHYDE	SPURLOCK ADHESIVES			910065
Test Method Type	Low	High	Description	
FORM % COA	44.5000	45.5000	44.5 - 45.5 Formaldehyde, 4.5 - 6% Meoh	
MEOH % COA	4.5000	6.0000 .		

Chemical	Supplier Name	City	State	Spec #
FORMIC, CYCLA	VARIOUS			910201
Test Method Type	Low	High	Description	
FORMIC % COA	G 85.0000	0.0000 .		

Chemical	Supplier Name	City	State	Spec #
HCL	VULCAN	BIRMINGHAM	AL	910026
Test Method Type	Low	High	Description	
HCL % COA	31.5000	34.0000	31.5 - 34% HCL	
Chemical	Supplier Name	City	State	Spec #
HCL (ANHYDR.)	VARIOUS			910106
Test Method Type	Low	High	Description	
HCL/PURE COA	99.0000	100.0000	99% Min. anhydrous for unit 5	
Chemical	Supplier Name	City	State	Spec #
IEPTNE DIR	CONE SOLVENTS	MEMPHIS	TN	910083
Test Method Type	Low	High	Description	
WATER % COA	0.0100	0.1000	0.1% water max	
Chemical	Supplier Name	City	State	Spec #
IEPTNE BFG	CONE SOLVENTS	MEMPHIS	TN	910084
Test Method Type	Low	High	Description	
IBP D F. COA	195.0000	205.0000	initial boiling point	
WATER % COA	0.0100	0.1000	.	
Chemical	Supplier Name	City	State	Spec #
HYDROGEN	PRAXAIR	MCINTOSH	AL	910086
Test Method Type	Low	High	Description	
HYDRO % COA	99.9000	100.0000	99.9% min.	
Chemical	Supplier Name	City	State	Spec #
IPA-CYMP	CONE SOLVENTS	MEMPHIS	TN	910150
Test Method Type	Low	High	Description	
IPA % COA	99.0000	100.0000	IPA FOR CYMP 99.0 MINIMUM	
Chemical	Supplier Name	City	State	Spec #
SOMIBK STAM	CONE SOLVENTS	MEMPHIS	TN	910070
Test Method Type	Low	High	Description	
WATER % COA	0.0100	0.4000	0.4% water max	
Chemical	Supplier Name	City	State	Spec #
SOMIBK STAM	UNION CARBIDE	CHARLESTON	WV	910071
Test Method Type	Low	High	Description	
WATER % COA	0.0100	0.4000	0.4% water max	
Chemical	Supplier Name	City	State	Spec #
SOPHORONE	CONE SOLVENTS	MEMPHIS	TN	910038

Test.	Method	Type	Low	High	Description
WATER	% COA		0.0100	0.5000	0.5% water max

Chemical	Supplier Name	City	State	Spec #
SOPHORONE	UNION CARBIDE	CHARLESTON	WV	910067

Test	Method	Type	Low	High	Description
WATER	% COA		0.0100	0.5000	0.5% water max

Chemical	Supplier Name	City	State	Spec #
SOPHORONE	ACETO AGRICULTURAL CHEMS.	LAKE SUCCESS,	NY	910116

Test	Method	Type	Low	High	Description
WATER,	% COA		0.0100	0.5000	.

Chemical	Supplier Name	City	State	Spec #
(SOPHORONE	VARIOUS			910112
Test Method Type	Low	High	Description	
WATER	coa	0.0010	0.5000 0.5% WATER MAX FROM COA	

Chemical	Supplier Name	City	State	Spec #
LIME	BRAVO LIME COMPANY	SAGINAW,	AL	910050
Test Method Type	Low	High	Description	
HYDRATED COA		1.0000	3.0000 Hydrated grade/ 1 = no, 2 = yes	

Chemical	Supplier Name	City	State	Spec #
1-680	CONE SOLVENTS	MEMPHIS	TN	910036
Test Method Type	Low	High	Description	
WATER % COA		0.0101	0.5000 0.5% water max	

Chemical	Supplier Name	City	State	Spec #
RESITYL OXD.	HOECHST-CELANESE	PAMPA	TX	910047
Test Method Type	Low	High	Description	
WATER % COA		0.0100	0.5000 0.5% water max	

Chemical	Supplier Name	City	State	Spec #
ETHANOL	CHEMTECH	ST LOUIS,	MO	910113
Test Method Type	Low	High	Description	
MEOH % COA		99.0000	100.0000 99.0 % MINIMUM	

Chemical	Supplier Name	City	State	Spec #
ETHANOL	METHANEX	MEDICINE HAT,ALB, CANADA		910030
Test Method Type	Low	High	Description	
MEOH % COA		99.0000	100.0000 99.% Meoh min	

Chemical	Supplier Name	City	State	Spec #
ETHANOL,CYC	CONE SOLVENTS	MEMPHIS	TN	910196
Test Method Type	Low	High	Description	
MEOH, % COA	G	99.0000	0.0000 .	

Chemical	Supplier Name	City	State	Spec #
ETHANOL\TA	CONE SOLVENTS	MEMPHIS	TN	910168
Test Method Type	Low	High	Description	
ASSAY % COA		99.0000	100.0000 .	
IMPURS MS-1		1.0000	2.0000 .	
WATER % COA		0.0100	0.2000 .	

Chemical	Supplier Name	City	State	Spec #
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METHNOL\FMC	CONE SOLVENTS			MEMPHIS		TN	910137
Test	Method	Type	Low	High	Description		
% MEOH	COA		85.0000	100.0000	.		
%H2O	COA		0.0100	5.0000	.		

Chemical	Supplier Name			City		State	Spec #
METHOL-DOVER	CONE SOLVENTS			MEMPHIS		TN	910162
Test	Method	Type	Low	High	Description		
ASSAY %	COA		95.0000	100.0000	.		
H2O PPM	COA		0.0100	200.0000	.		

Chemical	Supplier Name			City		State	Spec #
METHYLATECYC	DEGUSSA						910198
Test	Method	Type	Low	High	Description		
NAMETHL%	COA		29.5000	31.0000	.		

Chemical	Supplier Name			City	State	Spec #
MIXED ACID	EL DORADO CHEMICAL			ST. LOUIS	MO	910089
Test	Method	Type	Low	High	Description	
H2SO4 %	COA		64.0000	66.5000	Sulfuric 64 - 66.5 / Nitric = 33 -35%	
HNO3 %	COA		33.0000	35.0000	Nitric	
IF WATER			0.0100	1.0000	.	
IS NEG.			0.0100	1.0000	.	
REJECT!!			0.0100	1.0000	.	
THE SHPM			0.0100	1.0000	.	
WATER %	GAM-2		0.0001	0.5000	.	

Chemical	Supplier Name			City	State	Spec #
MOLINATE	HUNGARY					910178
Test	Method	Type	Low	High	Description	
MOLINT %	COA	G	96.0000	100.0000	MOLINATE %	

Chemical	Supplier Name			City	State	Spec #
MOLYB CAT.	VARIOUS					910118
Test	Method	Type	Low	High	Description	
BFG OK'D	none		1.5000	3.0000	1 = no / 2 = yes bfg approved	

Chemical	Supplier Name			City	State	Spec #
MORPHOLINE	VARIOUS					910098
Test	Method	Type	Low	High	Description	
%MORPH	COA		99.0000	100.0000	%morpholine 99% min	

Chemical	Supplier Name			City	State	Spec #
PROPANOL	VARIOUS					910166
Test	Method	Type	Low	High	Description	
DIST.RNG	COA		96.0000	98.0000	distillation range of 96-98C max is only spec.	

Chemical	Supplier Name			City	State	Spec #
PROPYL ALC	CONE SOLVENTS			MEMPHIS	TN	910170
Test	Method	Type	Low	High	Description	
PURITY	dry base		99.9000	100.0000	purity on dry basis (without water)	
WATER	by wt.		0.0001	0.1000	water 0.1% max	

Chemical	Supplier Name			City	State	Spec #
ADONE	CONE SOLVENTS			MEMPHIS	TN	910037
Test	Method	Type	Low	High	Description	
WATER	COA		0.0100	0.5000	0.5% max	

Chemical	Supplier Name			City	State	Spec #

NAOH 20	.	CHEMTECH.		MEMPHIS		TN	910077
Test	Method	Type	Low	High	Description		
NAOH	COA		19.0000	21.0000	19 - 21% Naoh		

Chemical		Supplier Name		City		State	Spec #
NAOH 50		VULCAN		BIRMINGHAM		AL	910074
Test	Method	Type	Low	High	Description		
NAOH	% COA		48.0000	51.0000	48 - 51% Naoh		

Chemical		Supplier Name		City		State	Spec #
NAOH 50		LA ROCHE INDUSTRIES		GRAMERCY		LA	910024
Test	Method	Type	Low	High	Description		
NAOH	% COA		48.0000	51.0000	48 - 51% Naoh		

Chemical	Supplier Name	City	State	Spec #	
IAOH 50	IDEAL	MEMPHIS	TN	910072	
Test	Method	Type	Low	High	Description
NAOH %	COA		48.0000	51.0000	48 - 51% Naoh
Chemical	Supplier Name	City	State	Spec #	
IAOH 50	CONE\CO FORMOSA PLASTICS	POINT COMFORT	TX	910073	
Test	Method	Type	Low	High	Description
NAOH %	COA		48.0000	51.0000	48 - 51% Naoh
Chemical	Supplier Name	City	State	Spec #	
IAOH 50	CHEMTECH.	MEMPHIS	TN	910107	
Test	Method	Type	Low	High	Description
NAOH %	COA		48.0000	51.0000	48 - 51% Naoh
Chemical	Supplier Name	City	State	Spec #	
IAOH 50 %RAY	PIONEER	SOMEWHERE ELSE		910023	
Test	Method	Type	Low	High	Description
IRON, PPM	COA		0.0100	5.0000	.
NACL, PPM	COA		0.0100	50.0000	,
NAOH %	COA		48.0000	51.0000	48 - 51% Naoh,
Chemical	Supplier Name	City	State	Spec #	
IAOH-CYMP	CONE SOLVENTS	MEMPHIS	TN	910152	
Test	Method	Type	Low	High	Description
NAOH %	COA		0.0100	100.0000	.
Chemical	Supplier Name	City	State	Spec #	
IAOH-DOVER	VARIOUS			910158	
Test	Method	Type	Low	High	Description
H2O PPM	COA		0.0100	200.0000	.
NAOH%	COA		99.9000	100.0000	.
Chemical	Supplier Name	City	State	Spec #	
IAOH-MEM-ACI	VULCAN	BIRMINGHAM	AL	910088	
Test	Method	Type	Low	High	Description
IRON PPM	COA		0.0100	5.0000	5 ppm Max Iron
NAOH %	COA		49.0000	51.0000	49 - 51 % Naoh
Chemical	Supplier Name	City	State	Spec #	
IAOH-RAYON50	BRENNTAG MIDSOUTH			910214	
Test	Method	Type	Low	High	Description
FE, PPM	coa		0.0100	5.0000	.

NACL, PPM coa	0.0100	50.0000 .
NAOH % coa	48.0000	51.0000 .

Chemical	Supplier Name	City	State	Spec #	
NAOH-SOLID	CHEMTECH	ST LOUIS,	MO	910075	
Test	Method	Type	Low	High	Description
NAOH	COA		95.0000	100.0000	95% Naoh Min

Chemical	Supplier Name	City	State	Spec #	
NAOH50	VERTEX	MEMPHIS	TN	910175	
Test	Method	Type	Low	High	Description
NAOH %	COA		48.0000	51.0000 .	

Chemical	Supplier Name	City	State	Spec #			
NICKEL	VARIOUS			910110			
Test	Method	Type	Low	High	Description		
RAINEY?	OR RQ?		1.0000	3.0000	SPONGE, RAINEY NICKEL	1 = NO,	2 = YES
Chemical	Supplier Name	City	State	Spec #			
NICKEL CAT.	ACTIVATED METALS	SEVIERVILLE	TN	910117			
Test	Method	Type	Low	High	Description		
NICKEL	COA		2.0000	2.0000	1 for no,, 2 for yes		
Chemical	Supplier Name	City	State	Spec #			
NIT.ACID\FMC	EL DORADO CHEMICAL	ST. LOUIS	MO	910138			
Test	Method	Type	Low	High	Description		
% H2O	COA		0.0001	0.0001	.		
% HNO3	COA		60.0000	85.0000	.		
% OLEUM	COA		0.5000	2.5000	.		
Chemical	Supplier Name	City	State	Spec #			
NITRIC ACID	ELDORADO CHEMICAL	EL DORADO	AR	910007			
Test	Method	Type	Low	High	Description		
NITRIC %	COA		98.0000	100.0000	98% Min		
Chemical	Supplier Name	City	State	Spec #			
NITRIC ACIF	ELDORADO CHEMICAL	EL DORADO	AR	910156			
Test	Method	Type	Low	High	Description		
IRON,PPM	COA		0.0100	50.0000	Iron, ppm		
NITRIC %	COA		98.0000	100.0000	.		
Chemical	Supplier Name	City	State	Spec #			
NITROGEN	AIR PRODUCTS	DECATUR	AL	910008			
Test	Method	Type	Low	High	Description		
OXYG PPM	COA		0.0100	3.0000	3 ppm Oxygen max		
WATERPPM	COA		0.0100	3.0000	3 PPM Water max		
Chemical	Supplier Name	City	State	Spec #			
NITROGEN	PRAXAIR	MCINTOSH	AL	910186			
Test	Method	Type	Low	High	Description		
H2O,PPM	COA		0.0100	5.0000	.		
O2, PPM	COA		0.0100	8.0000	.		
Chemical	Supplier Name	City	State	Spec #			
NITROMETHANE	AUSTIN CHEMICAL			910128			
Test	Method	Type	Low	High	Description		

% NM. COA 99.5000 100.0000 % Nitromethane

Chemical	Supplier Name	City	State	Spec #
NITROMETHANE	ACETO AGRICULTURAL CHEMS	LAKE SUCCESS	NY	910192
Test Method	Type	Low High	Description	
NITMET % COA		99.5000 100.0000	.	

Chemical	Supplier Name	City	State	Spec #
NITROMETHANE	WEGO	GREAT NECK	NY	910032
Test Method	Type	Low High	Description	
NM. % COA		99.5000 100.0000	99.5% min	

Chemical	Supplier Name	City	State	Spec #	
JITROPROPANE	ANGUS			910215	
Test	Method	Type	Low	High	Description
1-NP %	COA		99.0000	100.0000	.
H2O %	COA		0.0100	0.2000	.
Chemical	Supplier Name	City	State	Spec #	
JORCAT	VARIOUS			910119	
Test	Method	Type	Low	High	Description
BFG OK'D	none		1.5000	3.0000	1 = no / 2 = yes bfg approved
Chemical	Supplier Name	City	State	Spec #	
JDCB	SOLUTIA	SAUGET	IL	910130	
Test	Method	Type	Low	High	Description
ODCB %	COA		98.5000	100.0000	ODCB %
PDCB %	COA		0.0100	1.0000	PDCB %
Chemical	Supplier Name	City	State	Spec #	
JDCB	STANDARD CHLORINE	DELAWARE CITY,	DE	910009	
Test	Method	Type	Low	High	Description
ODCB %	COA		98.5000	100.0000	98.5% odcb min, 1% pdcb max
PDCB %	COA		0.0100	1.0000	.
Chemical	Supplier Name	City	State	Spec #	
JDCB	METACHEM\STANDARD	DELAWARE CITY	DE	910164	
Test	Method	Type	Low	High	Description
ODCB %	COA		98.5000	100.0000	.
PDCB,%	COA		0.0100	1.0000	.
Chemical	Supplier Name	City	State	Spec #	
JDCB	PPG INDUSTRIES	NATRIUM	WV	910046	
Test	Method	Type	Low	High	Description
ODCB %	COA		98.4999	100.0000	98.5 % min ODCB, 1% max pdcb
PDCB %	COA		0.0100	1.0000	98.5%min ODCB/ 1.0%PDCB max
Chemical	Supplier Name	City	State	Spec #	
JDCB	MONSANTO	SAUGET	IL	910010	
Test	Method	Type	Low	High	Description
ODCB %	COA		98.5000	100.0000	98.5% min odcb, 1% max pdcb
PDCB %	COA		0.0100	1.0000	.
Chemical	Supplier Name	City	State	Spec #	
JLEUM \FMC	FMC	GREEN RIVER	WY	910139	

Test.	Method	Type	Low	High	Description
% SULF.	COA		104.0000	105.5000	

Chemical	Supplier Name	City	State	Spec #
ORDRAM	SYNGENTA	BUCKS	AL	910203

Test	Method	Type	Low	High	Description
ORDRAM %	COA		96.0000	100.0000	MOLINATE FOR ORDRAM

Chemical	Supplier Name	City	State	Spec #
PALLIDIUM	VARIOUS			910171

Test	Method	Type	Low	High	Description
% PALLID %			5.0000	100.0000	5% min. Pallidium on Carbon
CARBON	Number		1940.0000	10000.0000	Carbon number 1940 SWR

Chemical	Supplier Name	City	State	Spec #	
PAM	KURRARAY	TOKYO	JP	910029	
Test	Method	Type	Low	High	Description
PAM %	COA		97.0000	100.0000	97% min
Chemical	Supplier Name	City	State	Spec #	
PBA	NIPA HARDWICKE	ELGIN	SC	910025	
Test	Method	Type	Low	High	Description
PBA %	COA		98.5000	100.0000	98.5% min
Chemical	Supplier Name	City	State	Spec #	
PBALD	AMERIBROM	BEER SHEVA, ISRAEL		910051	
Test	Method	Type	Low	High	Description
PBALD %	COA		97.0000	100.0000	97% min
Chemical	Supplier Name	City	State	Spec #	
PCE	SAFETY KLEEN	Hebron	oh	910217	
Test	Method	Type	Low	High	Description
H2O, PPM	coa		0.0100	200.0000	.
Chemical	Supplier Name	City	State	Spec #	
PCL3	A AND W AMERICAS	CHARLESTON	SC	910049	
Test	Method	Type	Low	High	Description
PCL3 %	COA		99.0000	100.0000	99% min
Chemical	Supplier Name	City	State	Spec #	
PCL3	VARIOUS			910095	
Test	Method	Type	Low	High	Description
%PCL3	from COA		99.5000	100.0000	% PCL3 for Eth 99.5% min
Chemical	Supplier Name	City	State	Spec #	
PE-DOVER	PERSTORP			910160	
Test	Method	Type	Low	High	Description
ASSAY, %	COA		99.0000	100.0000	.
H2O, PPM	COA		0.0100	200.0000	.
Chemical	Supplier Name	City	State	Spec #	
PENNSPRAY 70	PENNZOIL CO.	SHREVEPORT	LA	910148	
Test	Method	Type	Low	High	Description
NAME	NAME		1.0000	3.0000	1 = NAME DOES NOT MATCH 2 = NAME MATCHES COA
Chemical	Supplier Name	City	State	Spec #	
PENNZPAR 71	ATLAS PROCESSING CO			910052	

Test	Method	Type	Low	High	Description
CHK GRDE	COA		1.0000	3.0000	1 = bad, 2 = good, ok

Chemical	Supplier Name	City	State	Spec #
PERKLONE D	ICI CHEMICALS & POLYMERS	WILMINGTON	DE	910155

Test	Method	Type	Low	High	Description
H2O, PPM	COA		0.0100	200.0000	.

Chemical	Supplier Name	City	State	Spec #
PHENOL-DOVER	ARISTECH			910157

Test	Method	Type	Low	High	Description
ASSAY%	COA		99.0000	100.0000	.
H2O, PPM	COA		0.0100	200.0000	.

Chemical	Supplier Name	City	State	Spec #
PLATINUM CAT	JOHNSON MATTHEY	WEST DEPTFORD	NJ	910042
Test Method	Type	Low	High	Description
PERFORM TEST		1.0000	3.0000	1=fail, 2=pass
Chemical	Supplier Name	City	State	Spec #
PROP ANHYD.	EASTMAN CHEMICAL CO.	KINGSPORT	TN	910022
Test Method	Type	Low	High	Description
ANHYD % COA		98.0000	100.0000	98%min
Chemical	Supplier Name	City	State	Spec #
PROP. ACID	HOECHST-CELANESE	PAMPA	TX	910041
Test Method	Type	Low	High	Description
PROP % COA		98.0000	100.0000	98%min
Chemical	Supplier Name	City	State	Spec #
PROP. ACID	UNION CARBIDE	CHARLESTON	WV	910020
Test Method	Type	Low	High	Description
PROP % COA		98.0000	100.0000	98%min
Chemical	Supplier Name	City	State	Spec #
PROP. ACID	EASTMAN CHEMICAL	LONGVIEW	TX	910013
Test Method	Type	Low	High	Description
PROP % COA		98.0000	100.0000	98%min
Chemical	Supplier Name	City	State	Spec #
PTPM-TETRA	VARIOUS			910181
Test Method	Type	Low	High	Description
PTPM % COA		35.0000	72.0000	.
Chemical	Supplier Name	City	State	Spec #
R118118	ZENECA	UNITED KINGDOM		910014
Test Method	Type	Low	High	Description
R118118% COA		33.0000	38.0000	R118118% is 33% min-38% max
TOL, % COA	N	0.0000	0.0000	.
Chemical	Supplier Name	City	State	Spec #
RUBBER	VARIOUS			910101
Test Method	Type	Low	High	Description
ASH COA		0.0001	0.2000	ALKYL LITHIUM POLYMERIZED POLYBUTADIENE = RUBBER
COLOR COA		0.0001	10.0000	APHA ON COA COLOR
DIS.TIME COA		0.0001	4.0000	DISSOLVING TIME = 4 HOURS MAX
MOONEY V COA		47.0000	57.0000	ON COA MOONEY VISCOSITY

SOL. VIS COA	147.0000	177.0000	SOLUTION VISCOSITY OF 5.43% IN TOLUENE
STABILZR COA	0.5200	1.0800	STABILIZER
TOL.INS COA	0.0001	0.0100	TOLUENE INSOLUBLES ON COA
TURBIDIT COA	0.0001	0.0001	TURBIDITY, SPEC. = CLEAR
VIS.GEL COA	0.0001	0.0001	VISUAL GELS = NIL IS SPEC.
VOL.MAT	0.0001	0.6000	VOLATILE MATTER

Chemical	Supplier Name	City	State	Spec #	
SALT	MORTON - SALT (CONE SOLV)	MEMPHIS	TN	910091	
Test	Method	Type	Low	High	Description
SALT	% COA	,	99.5000	100.0000	Salt % 99.5% min

Chemical	Supplier Name	City	State	Spec #	
SALT	CARGILL	MEMPHIS	TN	910027	
Test	Method	Type	Low	High	Description
SALT	% COA		99.0000	100.0000	Salt % = 99% min
Chemical	Supplier Name	City	State	Spec #	
SICL4	VARIOUS			910121	
Test	Method	Type	Low	High	Description
PURITY	COA/%wt		99.5000	100.0000	the purity is expressed in %weight, 99.5%minimum. Silvestra
Chemical	Supplier Name	City	State	Spec #	
SOD.CARB\FMC	IDEAL	MEMPHIS	TN	910140	
Test	Method	Type	Low	High	Description
% ASSAY	COA		99.2000	100.0000	.
% H2O	COA		0.0100	0.2500	.
% NAO2	COA		58.0000	100.0000	.
GRADE100	COA		0.0100	2.0000	.
GRADE160	COA		0.0100	2.0000	.
Chemical	Supplier Name	City	State	Spec #	
SODA ASH	IDEAL	MEMPHIS	TN	910053	
Test	Method	Type	Low	High	Description
MESH 100	COA		1.0000	3.0000	80-100 mesh 1 = no, 2 = yes
Chemical	Supplier Name	City	State	Spec #	
SODA ASH	VARIOUS			910122	
Chemical	Supplier Name	City	State	Spec #	
STEP 3\DMF	FMC CORP APG	BALTIMORE	MD	910132	
Test	Method	Type	Low	High	Description
% ACTIVE	COA		17.0000	20.0000	.
Chemical	Supplier Name	City	State	Spec #	
STEPFAC 8170	STEPAN	WINDER	GA	910035	
Test	Method	Type	Low	High	Description
PERFORM	PROP-7		1.0000	3.0000	1 = fail, 2 = pass
Chemical	Supplier Name	City	State	Spec #	
STEROLS	ARCHER DANIEL MIDLAND	DECATUR	GA	910172	
Test	Method	Type	Low	High	Description
STEROLS%	COA		90.0000	100.0000	TOTAL FREE STEROLS
Chemical	Supplier Name	City	State	Spec #	
STEROLS	HENKLE CHEMICALS			910173	

Test	Method	Type	Low	High	Description
STEROLS%	COA		90.0000	100.0000	.

Chemical	Supplier Name	City	State	Spec #	
SULF ACD ACI	ELDORADO CHEMICAL	EL DORADO	AR	910079	
Test	Method	Type	Low	High	Description
IRON PPM	COA		0.0100	40.0000	Iron ppm is 40 max, Sulf % is 93% min, Water % 7 max
SULF %	COA		98.0000	100.0000	Sulfuric Acid %

Chemical	Supplier Name	City	State	Spec #	
SULF ACD DCA	ELDORADO CHEMICAL	EL DORADO	AR	910080	
Test	Method	Type	Low	High	Description
SULF %	COA		98.0000	100.0000	Sulf % is 98% min

Chemical	Supplier Name	City	State	Spec #
SULF ACID DIR	ELDORADO CHEMICAL	EL DORADO	AR	910081
Test Method Type	Low	High	Description	
SULF % COA	93.0000	100.0000	Sulf % is 93% min	
Chemical	Supplier Name	City	State	Spec #
SULF ACID TA	ELDORADO CHEMICAL	EL DORADO	AR	910082
Test Method Type	Low	High	Description	
SULF % COA	93.0000	100.0000	sulf % = 93% min	
Chemical	Supplier Name	City	State	Spec #
SULF.ACD\FMC	CHEMTECH.	MEMPHIS	TN	910141
Test Method Type	Low	High	Description	
% ASSAY COA	93.0000	100.0000	.	
Chemical	Supplier Name	City	State	Spec #
SULFURIC EO	VARIOUS			910096
Test Method Type	Low	High	Description	
%ACTIVE FROM COA	97.0000	100.0000	SULFURIC FOR SCRUBBER, % Active is 97% min	
Chemical	Supplier Name	City	State	Spec #
P-500 SOLVNT	MOBIL CHEMICAL	CHALMETTE	LA	910054
Test Method Type	Low	High	Description	
CHK GRDE COA	1.0000	3.0000	1 = fail, 2 = pass	
Chemical	Supplier Name	City	State	Spec #
CAP-ANTIBLZE	A AND W AMERICAS	CHARLESTON	SC	910185
Test Method Type	Low	High	Description	
COA GRADE N	0.0000	0.0000	coa for antiblaze	
Chemical	Supplier Name	City	State	Spec #
TEA FOR 2AB	ATOFINA	Oakville		910216
Test Method Type	Low	High	Description	
TEA % coa	99.0000	100.0000	.	
WATER, % coa	0.0100	0.1000	,	
Chemical	Supplier Name	City	State	Spec #
ENNECO AV-1	CONE SOLVENTS	MEMPHIS	TN	910109
Test Method Type	Low	High	Description	
AV-1 GRD	1.0000	3.0000	1 = is not the right grade, 2 = is the right grade	
Chemical	Supplier Name	City	State	Spec #
EPA	VARIOUS			910124

Test.	Method	Type	Low	High	Description
%TEPA	coa		90.0000	100.0000	tepa for dca storage

Chemical	Supplier Name	City	State	Spec #
THIONYL CHLD	BAYER CHEMICALS	BAYTOWN	TX	910017

Test	Method	Type	Low	High	Description
THIOCHL%	COA		99.0000	100.0000	99% min

Chemical	Supplier Name	City	State	Spec #
TOLUENE	EXXON	HOUSTON	TX	910019

Test	Method	Type	Low	High	Description
TOLUEN %	COA		97.0000	100.0000	% Tol 97% min, % water .05 max
WATER %	COA		0.0100	0.0500	0.05%max

Chemical	Supplier Name	City	State	Spec #	
TOLUENE/FMC	FMC	GREEN RIVER	WY	910142	
Test	Method	Type	Low	High	Description
SULFEN%	COA	N	0.0000	0.0000	.
Chemical	Supplier Name	City	State	Spec #	
FOXIMUL 804	STEPAN	WINDER	GA	910016	
Test	Method	Type	Low	High	Description
PERFORM	PROP-7		1.0000	3.0000	1 = fail, 2= pass
Chemical	Supplier Name	City	State	Spec #	
PPP-DOVER	DOVER CHEMICAL	DOVER	OH	910159	
Test	Method	Type	Low	High	Description
ASSAY %	COA		97.0000	100.0000	Assay %
COLOR	COA		0.0100	50.0000	.
Chemical	Supplier Name	City	State	Spec #	
PPP-TETRA	VARIOUS			910180	
Test	Method	Type	Low	High	Description
TPP %	COA		28.0000	65.0000	.
Chemical	Supplier Name	City	State	Spec #	
XYLENE	CONE SOLVENTS	MEMPHIS	TN	910193	
Test	Method	Type	Low	High	Description
XYLENE %	coa	G	99.5000	0.0000	.
Chemical	Supplier Name	City	State	Spec #	
XYLENE-CYCLA	CONE SOLVENTS	MEMPHIS	TN	910195	
Test	Method	Type	Low	High	Description
XYLENE %	COA	G	99.5000	0.0000	.
Chemical	Supplier Name	City	State	Spec #	
XYLENE-DOVER	CONE SOLVENTS	MEMPHIS	TN	910161	
Test	Method	Type	Low	High	Description
ASSAY %	COA		95.0000	100.0000	.
H2O,PPM	COA		0.0100	200.0000	.

CONSIGNEE DELIVERY RECEIPT

Freight Bill # 067035883 RC TNBR#:		CONSIGNEE CEDAR CHEMICAL 49 PHILLIPS RD 311 HWY 242 HELENA		SHIPPER GREEN PRINTING CO INC 101 LEXINGTON PKY LEXINGTON NC 27295				
Date: 09/07/2001		AR 72342						
H/U	PCS	HM	DESCRIPTION	WGT-LBS	NMFC	PCF CLASS	RATE	CHARGES
		1	PO# NS PRINTED MATTER 000150 FUEL SURCHG LTL SHPT3.00% ** FAK RATES APPLIED **	139	161870-00		070	
1		1	PREPAID - WILL INVOICE THIRD PARTY	139				
ANY ADDITIONAL SERVICES MAY RESULT IN ADDITIONAL CHARGES *CHARGES SUBJECT TO CHANGE*				B/L # NS	0.00			
Received by:				P.O. # NS				
Date: <u>9.11</u> Arrive: <u>1214</u> Depart:								
Delv. Driver: <u>L. T. 2572</u> Driver #:								
<input checked="" type="checkbox"/> DELV WITH S/W INTACT <u>1</u> # of Skids Delv <input type="checkbox"/> CLEAR <input type="checkbox"/> SHORT <input type="checkbox"/> OVER <input type="checkbox"/> DAMAGE				 <p>P.O. Box 840, Harrison, AR 72602-0840 (ARFW) Phone: 800-447-8139 Page 1 of 1</p>				
EXCEPTIONS:								

AVENTIS CROPSCIENCE
NORTH AMERICAN SUPPLY CHAIN
Purchasing Department

FACSIMILE

MAILING ADDRESS

PO Box 12014
Research Triangle Park, NC 27709

DATE: 13 December, 2000
TO: LISA WALKER
LOCATION: CEDAR CHEMICAL
FAX NO: 870/572-3795
TOTAL NO. PAGE (Including Cover Sheet): 1
FROM: DAVID LINHARDT (TEL. 919/549-2100) (FAX. 919/549-2789)
MESSAGE: CYCLANILIDE DRUMS

Lisa.. this is confirmation that the OS-30 drum supplied by Greif Bros. is acceptable for storage and transport of cyclanilide technical.

We would prefer to use the straight walled drums rather than the tapered drums due to ease of palletizing and stretch-wrapping. Based on the hazard classification of cyclanilide, we only require Y180 construction/certification.

If you need any further assistance, please call.



Dave Linhardt

Cc: Sue Fritz

JIM KEVIN PARKER KRUSLING

Confirmation Report—Memory Send

Time : Nov-27-00 14:31
 Tel line 1 : +8705723795
 Name : CEDAR CHEMICAL

Job number : 805
 Date : Nov-27 14:29
 To : 18195492003
 Document Pages : 02
 Start time : Nov-27 14:29
 End time : Nov-27 14:31
 Pages sent : 02
 Job number : 805

*** SEND SUCCESSFUL ***

NO. 1236 P 2/3



GREIF BROS. CORPORATION
INDUSTRIAL SHIPPING CONTAINER GROUP
PLASTIC DRUM STANDARD PRODUCT DESCRIPTION

Product Identification Numbers PS-30 OS-30 Y150 Y180		Product Class OS-30	
Recycle Symbol Information UN 1845/1846 UN 1845/1846/S Y125 Y150 Y180		Product Dimensions Body: OS-30 Cover: Plain & B & V Lockhead: SLL & Bolt Ring: 2" & W"	
Nominal Capacity: 30.0 U.S. Gallons		Output: 2.2 U.S. Gallons	
Actual Capacity: 32.2 U.S. Gallons		Output %: 7.3 %	
Export Code: 6 05 Ch B		Overall Height: 29.4 inches	
Min. Stacking Distance: 18.7 inches		Body Height: 28.1 inches	
Opening I.D.: 17.5 inches		Total Weight: 14.6 lbs	
Normal Ch. H.: 19.3 inches		Body Weight: 11.3 lbs	
Min. Wall Thickness: 0.125 inches		Case Height: 0.530 inches	
Min. Flange Height: 11.4 inches			
SPECIAL NOTES:			
1) Maximum filling temperature -160 degrees F. When filled at this maximum temperature drum should be allowed to cool to ambient prior to stacking.		4) Handle with parrotbeak, side grabber, and sling.	
2) Stack 3 high (1 + 2) maximum with pallets between drums. Maximum top load on bottom drums not to exceed 600 lbs each. Pallets should be of good quality, which provide adequate support for plastic drums.		5) All dimensions are nominal.	
3) Recycle symbol embossed on bottom.		6) For use with hazardous dry product in accordance with 49CFR.	
		7) The Y150 rating is produced at Houston.	
		8) The Y180 rating is produced at Lockport.	
Tech Services: Leigh D. Evans		Date: 12/17/99	
Manufacturing: Timothy R. Webber		Revision Date: 12/13/99	
Sales: J. Craig		OS-30	
		Date: 1/3/00	

To: "krusling@cvrtmail.com" <krusling@cvrtmail.com>
Subject: FW: Cyclaniilide

-----Original Message-----

From: Serge.Ravet@aventis.com [SMTP:Serge.Ravet@aventis.com]
Sent: Tuesday, November 14, 2000 11:37 AM
To: jmancini@cvrtmail.com
Cc: Dan.Stahl@aventis.com
Subject: RE: Cyclaniilide

Joe;

Herefter the characteristics of the drum so far been used for Cyclanilide, obviously these datas are given in the metric system:

PE Drum with two flat sides:

volume . 120 l

Height: 900 mm

Width: 396 mm

Weight: 5,70 kg

Color: blue

Net Weight: 50 kg

regrouped with 6 drums on 1 pallett 1000x1200 mm.

We are checking at the moment the kind of internal bag which was used.

Concerning the meeting in december, Pierre and I are oblige to delay by one week and now we are thinking the 19 th of december, will it be OK on your side.

Best regards.

Serge Ravet

-----Message d'origine-----

De: Stahl, Dan

Date: vendredi 10 novembre 2000 16:22

A: Cedar Chemical Corporation

Cc: Ravet, Serge

Objet: Cyclaniilide

Joe-

In regards to the drum issue, Serge has indicated that Cedar is to provide the drums following the same spec as currently being used.

Serge, since I am out of the office could you fax directly to Joe the specifications. His fax number is 901 684.5398.

In regards to my question on the Pre Manufacturing Notifications, I am just working through my check list and I wanted to confirm with you that Cedar has completed this step.

Thanks for your help!

Dan Stahl

Aventis Industrial Strategy

Phone: 919.549.2195

Fax: 919.549.2003

Mobile: 919.599.1525

E-mail: Dan.Stahl@aventis.com

From: Albert Pirigy <ajpirigyjr@hotmail.com>
To: lwalker@cvrtmail.com <lwalker@cvrtmail.com>; dmalcolm@cvrtmail.com <dmalcolm@cvrtmail.com>
Date: Monday, November 13, 2000 3:21 AM
Subject: Fwd: FW: Acifluorfen acid forecast 2001

FYI

>From: "Chris McGee" <mcgee@cvrtmail.com>
>To: "mike reinsager" <miker@cvrtmail.com>, "Jim Pirigy" <ajpirigyjr@hotmail.com>, "kevin Payne" <kpayne@cvrtmail.com>, "joe Mancini" <jmancini@cvrtmail.com>, "Jim Rone" <jrone@cvrtmail.com>
>Subject: FW: Acifluorfen acid forecast 2001
>Date: Mon, 13 Nov 2000 08:42:06 -0600

>
>FYI,
>
>Additional R-118118 is on its way, may be a little late but coming all the
>same.

>
>Chris

>-----Original Message-----

>From: Gregory Julian JA [mailto:Julian.Gregory@agna.zeneca.com]
>Sent: Wednesday, November 08, 2000 1:39 PM
>To: 'Chris McGee @ Cedar Chemical'; Gregory Julian JA; Walsh Shaun SH
>Subject: Acifluorfen acid forecast 2001

>
>Chris,
>
>Following up my voicemail of yesterday, I would like to get the latest on
>your equipment installation for the expansion and also to close out the
>letter amendment.

>
>Our expansion of R118 capacity is in place, although ramp up is a little
>behind plan due to the wide spread bad weather in the UK. However, you
>should be seeing increased rate of deliveries very shortly.

>
>Also as per the AA contract, I would like to confirm our 2001 acifluorfen
>acid requirements, inline with our discussions on increased offtake as:

>
>Q1 375tes 750,000
>Q2 375tes
>Q3 250tes - 500,000
>Q4 301tes 602,000

>
>Speak with you shortly

>
>Julian

5,204,000 LBS

11/13/00

AB0000028954

Shipped - 1824 x 640 = 200,640 LBS 91010kg

to ship - 304 = 33,440 LBS 15168kg

106,178

+ 4 Drums = 200kg

106378

invoiced: 60,873kg ✓

to invoice ~~45,305 kg~~
45,505 kg

60873
45105
200
106178

106178
112664
64886kg



degussa.

Fine Chemicals

Degussa AG - Werk Löhrlorf - D-53688 Mandelbühl

Zentrale Analytik Labor
 D-53688 Mandelbühl
 Telephone: 02203 / 89-242
 FAX: 02203 / 89-402
 2001-10-16

FAX-No. : 02386484834

Greenow Inc.

220 Davidson Avenue
 08873 Somers N.J USA

Your order No. : 0202120

Purchase order No. : 00420000
 Delivery No. : 0040484005000010
 Lot-No. : 1101072
 Quantity : 20000 KG

01010200-1011100-1/1

Certificate of Analysis

Product: **SODIUM METHYLATE SOLUTION 30%**

property	method	specification values	unit	value
Total alkalinity as NaOCH ₃	SOP 0527 (titrimetry)	29,5 - 31,0	mass-%	30,6
Total content of NaOH and Na ₂ CO ₃	SOP 0906 (Karl Fischer titration)	≤ 0,5	mass-%	0,2
Effective content sodium methylate	SOP 0527/053 (titrimetry)	29,5 - 30,5	mass-%	30,4

With these results of our inspections we certify that the material described above complies with the terms of the contract order.

Degussa AG
 Fine Chemicals

signed Dr. Fortner
 Quality Inspection Manager

This certificate has been prepared with care and to the best of our knowledge in full of the quality assurance system of Degussa AG. It is provided to our customers for information purposes only and does not release their obligation to perform proper incoming inspection upon receipt of the product. Furthermore, it is solely the customer's responsibility to determine the suitability of the product for its intended use. Degussa AG certifies that the product described herein fully meets its sales specification. © registered trademark of the Degussa AG

Certificate of Analysis machine-made; valid without signature.

RAW MATERIAL RECEIVING RECORD

NOV 1968

CEDAR CHEMICAL 9000-1 REV: C

TIME IN AT GATE <i>1010</i>	SECTION 1	RECEIVED BY <i>DL</i>
--------------------------------	-----------	--------------------------

DATE	ORDER NO	CAR OR TRUCK NO	DECLARED WEIGHT
<i>11/26/01</i>	<i>NA</i>	<i>CRXU8509841</i>	Net <i>NA 44268 LBS</i>

SHIPPER <i>Ovestis</i>	CARRIER <i>Yell States</i>
---------------------------	-------------------------------

QUANTITY	CONTAINER	DESTINATION	RAW MAT CODE #	DESCRIPTION
<i>1</i>	<i>8/c</i>	<i>units</i>	<i>NA</i>	<i>sodium</i>
				<i>metha late</i>
				<i>metha late</i>

COMMENTS
no C of A OK to unles by David Parker

SECTION 2

RECIPIENT	TIME SAMPLE/CERTIFICATE TAKEN TO LAB
<i>[Signature]</i>	

UNLOADED AT (tank number, unit, warehouse, etc.)

COMMENTS
Propped on island.

SECTION 3

LAB TECHNICIAN	ACCEPT	REJECT	REASON FOR REJECTION
<i>[Signature]</i>			

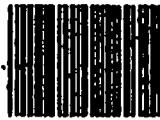
COMMENTS
C.H. QUALITY, CF PRINT OUT IS JUNK!

SECTION 4

SHIFT SUPERVISOR	ACCEPT	REJECT	REASON FOR REJECTION

PLANT WEIGHT	UNLOADING TIMES	
NET	START TIME	END TIME

COMMENTS



NEW ORLEANS
PHONE (504) 254-1400

DMH

DELIVERY RECEIPT

DISPATCH NO.: A*110-061865-002-01
IMPORT

BILL TO AVENTIS CROP SCIENCE		DATE 11/20/01 11:00
SHIPPER 15X RZR (NEW ORLEANS) 7801 ALMONASTER AVENUE ORIGIN: NEW ORLEANS LA		CONSIGNEE - DESTINATION AVENTIS CROP SCIENCE % OFDAR CHEMICAL CORP 49 PHILLIPS ROAD, 1311 DEST: HELENA AR
DRIVER'S NAME BERNARD J. JR., JAMES J.		TRUCK NO. 110662
ARRIVAL TIME		WEIGHT
DEPARTURE TIME	LABOR	START FINISH VERIFIED BY

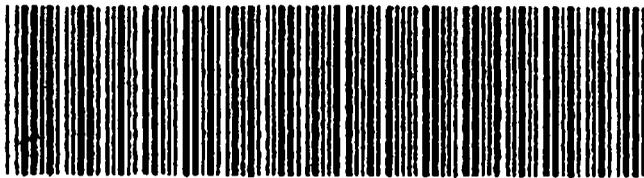
Container: MSULH084082 CD 20 Booking No:
 Chassis: 1ZT 260723 CH 20 Reference No.: 618340
 Vessel: MDC DIEGO VOY 127A No. of Pieces Received:
 Bill of Lading: MSULH084083 Seal No.:

Remarks:

RETURN EMPTY BULK
BOX RZR (NEW ORLEANS)
7801 ALMONASTER AVENUE

NEW ORLEANS LA

BEN FORTO, JR. RON DU
504) 244 4300



RECEIVED IN GOOD CONDITION EXCEPT AS OTHERWISE NOTED IN REMARKS

CUSTOMER SIGNATURE *Bernard J. Jr.* DATE

EQUIPMENT INSPECTION SECTION

CONTAINER NO	CHASSIS NO.	USE THESE CODES TO SHOW CONDITION <input checked="" type="checkbox"/> BRUISE <input checked="" type="checkbox"/> BROKEN <input checked="" type="checkbox"/> CUT <input checked="" type="checkbox"/> DENT 4 <input checked="" type="checkbox"/> HOLE <input checked="" type="checkbox"/> MISSING												
MARK CONDITION BELOW CHECK BOX ONLY IF DAMAGED AND DESCRIBE IN REMARKS:														
ROOF	UNDERSIDE	INSIDE	LEFT SIDE	FRONT	CHASSIS	REAR	RIGHT SIDE	TIRES	POSITION	BRAND/CONDITION	POSITION	BRAND/CONDITION		
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	R.O. FRONT		L.O. FRONT			
LIGHTS				TARPS/CROSS BOWS					R.I. FRONT		L.I. FRONT			
REFLECTORS				BRAKES/GLADHANDS					R.O. REAR		L.O. REAR			
FLAPS				DOORS					R.I. REAR		L.I. REAR			
SAE 7				LANDING GEARS										

NOTE: By signing for and/or receiving this shipment consignee agrees to receiving in good order the freight, container, chassis, and/or trailer in which freight is delivered and agrees to take on all responsibility of container, chassis, and/or trailer, to include, but not limited to, any towing, storage, per diem, cleaning, sweeping, or repair charge incurred by delivering carrier while equipment is, or was, in consignee's possession. Consignee agrees to notify delivering carrier when equipment is empty and/or available for pick-up and give reasonable time for carrier to pick up equipment. Consignee agrees to pay any collection costs, charges, and/or attorney fees incurred by delivering carrier if carrier finds it necessary to collect on any charges billed to consignee.

SIGNATURE *cl*

OUR ORGANIZATION IS TOTALLY COMMITTED TO PROVIDE DEFECT-FREE SERVICE THAT MEETS, OR EXCEEDS, OUR CUSTOMERS' REQUIREMENTS, THE FIRST TIME, EVERY TIME.

AB000028814



NEW ORLEANS
PHONE: (504) 254-1100

GOV R

OTH

DELIVERY RECEIPT

DISPATCH NO.: **110-081865-001-01
IMPORT

BILL TO AVENTIS CROP SCIENCE		DATE	APPT. 11/20/01 06.00
SHIPPER CSX R/R (NEW ORLEANS) 7801 ALMONASTER AVENUE MOVE: <input checked="" type="checkbox"/>		CONSIGNEE - DESTINATION AVENTIS CROP SCIENCE % CEDAR CHEMICAL CORP 49 PHILLIPS ROAD, #311	
ORIGIN: NEW ORLEANS LA		DEST: HELENA AR	
DRIVER'S NAME CALLEGAS, JAMES, ROBERT		TRUCK NO. 110661	WEIGHT
ARRIVAL TIME	DEPARTURE TIME	LABOR	START FINISH VERIFIED BY

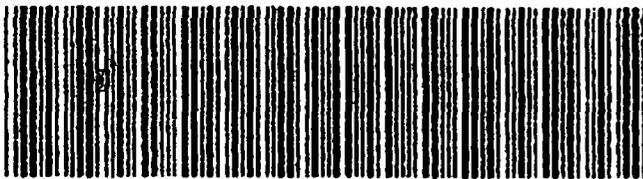
Container: MSCU114564S CU 20 Booking No.:
 Chassis: MSC2211773 CH 20 Reference No.: 618340
 Vessel: MSC DIEGO JOY 1274 No. of Pieces Received:
 Bill of Lading: MSCULH084083 Seal No.:

Remarks:

RETURN EMPTY RAIL TTD
~~CSX R/R (NEW ORLEANS)~~
~~7801 ALMONASTER AVE~~

NEW ORLEANS LA

BEN LORIO/GR RON DU
 (504) 244-4333



RECEIVED IN GOOD CONDITION EXCEPT AS OTHERWISE NOTED IN REMARKS

CUSTOMER SIGNATURE <i>Benjamin Lopez</i>	DATE
---	------

EQUIPMENT INSPECTION SECTION

CONTAINER NO.	CHASSIS NO.	USE THESE CODES TO SHOW CONDITION <input checked="" type="checkbox"/> BRUISE <input checked="" type="checkbox"/> BROKEN <input type="checkbox"/> CUT <input type="checkbox"/> DENT <input type="checkbox"/> HOLE <input type="checkbox"/> MISSING											
MARK CONDITION BELOW. CHECK BOX ONLY IF DAMAGED AND DESCRIBE IN REMARKS:										POSITION	BRAND/CONDITION	POSITION	BRAND/CONDITION
ROOF	UNDERSIDE	INSIDE	LEFT SIDE	FRONT	CHASSIS	REAR	RIGHT SIDE	TIRES		R.O. FRONT		L.O. FRONT	
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		R.I. FRONT		L.I. FRONT	
LIGHTS					TARPS/CROSS BOWS					R.O. REAR		L.O. REAR	
REFLECTORS					BRAKES/GLADHANDS					R.I. REAR		L.I. REAR	
FLAPS					DOORS								
SAE 7					LANDING GEARS								

NOTE: By signing for and/or receiving this shipment consignee agrees to receiving in good order the freight, container, chassis, and/or trailer in which freight is delivered and agrees to take on all responsibility of container, chassis, and/or trailer, to include, but not limited to, any towing, storage, per diem, cleaning, sweeping, or repair charge incurred by delivering carrier while equipment is, or was, in consignee's possession. Consignee agrees to notify delivering carrier when equipment is empty and/or available for pick-up and give reasonable time for carrier to pick up equipment. Consignee agrees to pay any collection costs, charges, and/or attorney fees incurred by delivering carrier if carrier finds it necessary to collect on any charges billed to consignee.

SIGNATURE

OUR ORGANIZATION IS TOTALLY COMMITTED TO PROVIDE DEFECT-FREE SERVICE THAT MEETS, OR EXCEEDS, OUR CUSTOMERS' REQUIREMENTS, THE FIRST TIME, EVERY TIME.

AB0000028814

AVENTIS CROPSCIENCE
2 T W ALEXANDER DR
RESEARCH TRIANGLE PARK, 27709

Attu: Owen
Dispatch

DATE 11/13/01
BILL NUMBER 393543302
ECS

THE MERCHANDISE DESCRIBED BELOW
WILL BE ENTERED AND FORWARDED AS
FOLLOWS:

REPORTING CARRIER MSC DIEGO		127A	CSX	LOCATION (5088)	PORT OF ORIGIN/PORT LE HAVRE, FRANCE
DATE OF INVOICE See Below	ISSUE DATE 11/12/01	PREPARED BY	LOCAL DELIVERY OR TRANSFER BY (DELIVERY CARRIER SHOULD YES) BTT TRUCKLINE		
FOR DELIVERY TO			HOUSE NO.	ENTRY NO. 336-3543302-4	DUTY RATE NO.
AVENTIS CROPSCIENCE USA LP L.F.D. C/O CEDAR CHEMICAL CORP. 49 PHILLIPS ROAD, # 311 HELENA, AR 72342			ROUTE		
			*** WILL ADVISE WHEN RELEASED *****		

NO. OF PKGS.	DESCRIPTION OF ARTICLES SPECIAL MARKS & EXCEPTIONS	WEIGHT	DDMMYY
TK	<p>2 2,4 DICHLORDANILINE # of Containers: 2</p> <p>80 DRUMS MSCU1145643 20 - 52547549 80 DRUMS MSCU2142802 20 - 4208</p> <p>SEND COLLECT FREIGHT BILL TO: AVENTIS CROPSCIENCE USA LP C/O FREIGHT TRAFFIC SERVICES PO BOX 1259 SOMERVILLE, N.J. 08876 I V6000170938 M MSCU LH084083 Notify: LIBA WALKER PH: 870-572-3701</p> <p>References: PO# 618340</p> <p><i>See attached for additional information</i></p> <p>SEAL H40077</p> <p>3861175 - BTT</p>	<p>97003 LB</p> <p>22000</p> <p>22000</p>	

ORIGINAL DELIVERY ORDER

INLAND FREIGHT → **PREPARE COLLECT**
Collect

Received In Good Order
By: *Berni*

Danzas A/E Customs Brokerage Services
Agents **AA** Agents Only
AVENTIS CROPSCIENCE *Eric*

DELIVERY CLERK: DELIVER TO CARRIER SHOWN ABOVE

254-5180



SHIPPING ORDER

must be legibly filled in, in ink, in indelible Pencil, or in Carbon, and retained by the Agent

Received, subject to all terms and conditions of the contract in effect between shipper and Carrier on the date of issue of this Bill of Lading, the property described below in apparent good order except as noted. In the event no contract is in effect, the Terms and Conditions of the Uniform Domestic Straight Bill of Lading as set forth in the appropriate rail or motor classification shall apply

CONSIGNEE:

AVENTIS CROPSCIENCE USA
 C/O CEDAR CHEMICAL CORPORATION
 49 PHILLIPS RD #31.1
 HELENA AR 72342
 USA

CONSIGNOR (SHIPPER):

Aventis CropScience USA LLP
 c/o Blackhawk Warehouse
 407 Phillips 311 Road
 Helena AR 72342
 USA

B/L NO.

80120373

Page: 1 of 1

Date: November 19, 2001

CARRIER: ALT CARRIER - Black

VEHICLE NO.: 8541

FREIGHT CHARGES: Prepaid

Carrier, Attach memorandum copy of Bill of Lading to Freight Bill and send

AVENTIS CROPSCIENCE C/O FTS
 C/O FTS FREIGHT PAYMENT PLAN
 P. O. BOX 1259
 SOMERVILLE NJ 08876-1259

24 HOUR EMERGENCY TELEPHONE NUMBER:

1-800-424-9300

SEAL NOS.

QUANTITY	MATERIAL NO.	HM.	DESCRIPTION	CLASS	ID	P.G.	HAERG	WEIGHT
15600 Kilograms	130277		CDM DRMP 1X200KG 78.200kg drums To deliver Monday, November 19th. X COMBUSTIBLE LIQUID, NOS, COMBUSTIBLE LIQUID, UN1993, PGIII Lot# 2001-83V = 7 2001-64V/83V = 46 2001-182V = 1 2001-648V = 24 19p204 1p202 Benji Taylor					34,788 LB

This is to certify that the above-named materials are properly classified, described, packaged, marked and labeled, and are in proper condition for transportation according to the applicable regulations of the Department of Transport

TOTAL SHIPPING UNITS
 78d.

PLACARDS REQUIRED:

DECLARED VALUE OF SHIPMENT

PLACARDS SUPPLIED?

YES NO-FURNISHED BY CARRIER

NAERG SUPPLIED?

YES NO-FURNISHED BY CARRIER

DRIVER'S SIGNATURE _____

TOTAL WEIGHT
 34,788 LB

C AMOUNT

O FEE

D TOTAL

Aventis
 P.O. Box 12014
 62 T.W. Alexander Drive
 Research Triangle Park, North Carolina 27709

Date: 11-19-01

Date: 11-19-01

Shipper: _____

Carrier: *Special Blend*

Consignee: *M. M. ...*

AB0000028814



SHIPPING ORDER

must be legibly filled in, in ink, in indelible Pencil, or in Carbon, and retained by the Agent

Received, subject to all terms and conditions of the contract in effect between shipper and Carrier on the date of issue of this Bill of Lading, the property described below in apparent good order, except as noted. In the event no contract is in effect, the Terms and Conditions of the Uniform Domestic Straight Bill of Lading as set forth in the appropriate rail or motor classification shall apply.

CONSIGNEE:**CONSIGNOR (SHIPPER):****B/L NO.**

AVENTIS CROPSCIENCE USA
C/O Wright Distribution Center
1000 Heathorn Road
Lima OH 45804
USA

Aventis CropScience USA LLP
c/o Wright Distribution Center
1000 Heathorn Road
Lima OH 45804
USA

80120376
Page: 1 of 1
Date: November 15, 2001
VEHICLE NO.: "DOYLE, BRAN"
FREIGHT CHARGES: *6/15*
Prepaid

Carrier: Attach memorandum copy of Bill of Lading to Freight Bill and send

24 HOUR EMERGENCY TELEPHONE NUMBER:
1-800-424-8000

SEAL NOS. *3784*

AVENTIS CROPSCIENCE C/O FTS
C/O FTS FREIGHT PAYMENT PLAN
P. O. BOX 1259
SOMERVILLE NJ 08876-1250

QUANTITY	MATERIAL NO.	HM	DESCRIPTION	CLASS	ID	P.C.	INSTR	WEIGHT
			DICHLORODANILINE SOLID MARINE POLLUTANT	6.1	UN1590	II	153	
			DIPICOLS. N.D.I.					
			USA (2.4-DICHLORODANILINE) 1250KG	DRM				<i>35,840</i> 78,360
			to arrive Monday, November 19, 2001					

This is to certify that the above-named materials are properly classified, described, packaged, marked and labeled, and are in proper condition for transportation according to the applicable regulations of the Department of Transport

TOTAL SHIPPING UNITS
64 Drums

PLACARDS REQUIRED:
DECLARED VALUE OF SHIPMENT

PLACARDS SUPPLIED?
 YES NO-FURNISHED BY CARRIER
HAZARD SUPPLIED?
 YES NO-FURNISHED BY CARRIER
DRIVER'S SIGNATURE _____

TOTAL WEIGHT
35,840
~~78,360~~

C AMOUNT
O FEE
D TOTAL

Aventis
P.O. Box 12014
82 T.W. Alexander Drive
Research Triangle Park, North Carolina 27709

Shipper: *[Signature]*

Date: *11-15-01*
Carrier: *[Signature]*

Date: _____
Consignee: *[Signature]*

RAW MATERIAL RECEIVING RECORD No 19583

CEDAR CHEMICAL 9000-1 REV: C

TIME IN AT GATE 0830	SECTION 1	RECEIVED BY SR
--------------------------------	-----------	--------------------------

DATE	ORDER NO.	CAR OR TRUCK NO.	DECLARED WEIGHT
------	-----------	------------------	-----------------

11-20-01		110662	Net 48,000
-----------------	--	---------------	-------------------

SHIPPER BTT AVENTIS	CARRIER BTT 22046
-------------------------------	-----------------------------

QUANTITY	CONTAINER	DESTINATION	RAW MAT CODE #	DESCRIPTION
48,000	MSCU2142302	warehouse		2.4 DCA
80 dis. @				
125 Kg ea.				

COMMENTS

SECTION 2

RECIPIENT	TIME SAMPLE/CERTIFICATE TAKEN TO LAB
-----------	--------------------------------------

Benni Jones	9:55
--------------------	-------------

UNLOADED AT (tank number, pit, warehouse, etc.)

COMMENTS

SECTION 3

LAB TECHNICIAN	ACCEPT	REJECT	REASON FOR REJECTION
----------------	--------	--------	----------------------

--	--	--	--

COMMENTS

SECTION 4

SHIFT SUPERVISOR	ACCEPT	REJECT	REASON FOR REJECTION
------------------	--------	--------	----------------------

--	--	--	--

PLANT WEIGHT NET 20,000 lbs.	UNLOADING TIMES	
	START TIME	END TIME

COMMENTS

Attn: Owen Dispatch

AVENTIS CROPSCIENCE
2 T W ALEXANDER DR
RESEARCH TRIANGLE PARK, 27709

DATE: 11/13/01
 CARRIER: 393543302 ECS

THE MERCHANDISE DESCRIBED BELOW
 WILL BE ENTERED AND FORWARDED AS
 FOLLOWS:

MSC DIEGO		127A	CSX	LE HAURE, FRANCE	
See Below	11/12/01		BTT TRUCKLINE		
			336-3543302-4		
FOR DELIVERY TO			ROUTE		
AVENTIS CROPSCIENCE USA LP L.F.D. C/O CEDAR CHEMICAL CORP. 49 PHILLIPS ROAD, # 311 HELENA, AR 72342			*** WILL ADVISE WHEN RELEASE *** *****		

NO. OF PKGS.	DESCRIPTION OF ARTICLES, SPECIAL MARKS & EXCEPTIONS	WEIGHT	DO NOT USE
TK	2 2,4 DICHLOROANILINE N. of Containers: 2 20 DRUMS MBCU1145643 20 - 52547549 30 DRUMS. MBCU2142802 20 - 4208 SEND COLLECT FREIGHT BILL TO: AVENTIS CROPSCIENCE USA LP C/O FREIGHT TRAFFIC SERVICES PO BOX 1259 SOMERVILLE, N.J. 08876 I V6000170938 M MBCU LH084083 Notify: LISA WALKER PH: 870-572-3701 Reference: FOM 618340	97003 LB 22000 22000	
	<i>p/v @ CSX</i> <i>they 49 Cross Bridge</i> <i>left at stop light 3-5 miles</i> <i>left next light</i> <i>1 mile or left</i>		
	<i>See attached for additional information</i>		
	<i>Bennis Ford</i>		

ORIGINAL DELIVERY ORDER

INLAND FREIGHT →

Freight Collect

Received In Good Order
 By: *Bennis Ford*

Danzas ABI Customs Brokerage Services
 Agents **AS** Agents Only
AVENTIS CROPSCIENCE

Luise Ballef

DELIVERY CLERK: DELIVER TO CARRIER SHOWN ABOVE

RAW MATERIAL RECEIVING RECORD No 19577

CEDAR CHEMICAL 9000-1 REV: C

TIME IN AT GATE 11:30	SECTION 1	RECEIVED BY JR
---------------------------------	------------------	--------------------------

DATE	ORDER NO.	CAR OR TRUCK NO.	DECLARED WEIGHT
------	-----------	------------------	-----------------

11-19-01	80120373	8541	Net 15,600 Kgs
-----------------	-----------------	-------------	-----------------------

SHIPPER Blackhawk	CARRIER Blackhawk
-----------------------------	-----------------------------

QUANTITY	CONTAINER	DESTINATION	RAW MAT CODE #	DESCRIPTION
15600 Kgs	8541	warehouse		COM DEMP 142005
78 dr. @				
200kgs ea.				

COMMENTS

SECTION 2

RECIPIENT	TIME SAMPLE/CERTIFICATE TAKEN TO LAB
-----------	--------------------------------------

Benn Ford	11:45
------------------	--------------

UNLOADED AT (tank number, unit, warehouse, etc.)

COMMENTS

SECTION 3

LAB TECHNICIAN	ACCEPT	REJECT	REASON FOR REJECTION
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COMMENTS

SECTION 4

SHIFT SUPERVISOR	ACCEPT	REJECT	REASON FOR REJECTION
------------------	--------	--------	----------------------

--	--	--	--

PLANT WEIGHT NET 15.603	UNLOADING TIMES	
	START TIME	END TIME

COMMENTS

RAW MATERIAL RECEIVING RECORD No 19569

CEDAR CHEMICAL. 9MM-1 REV: C

TIME IN AT GATE <i>18:10</i>	SECTION 1	RECEIVED BY
---------------------------------	-----------	-------------

DATE	ORDER NO.	CAR OR TRUCK NO.	DECLARED WEIGHT
<i>11-16-01</i>	<i>80120376</i>	<i>615</i>	Net <i>35.840</i>

SHIPPER <i>Mwright Distribution</i>	CARRIER <i>Doyle Brent</i>
--	-------------------------------

QUANTITY	CONTAINER	DESTINATION	RAW MAT CODE #	DESCRIPTION
<i>64 drums 250 Kg ea.</i>	<i>Trailer</i>	<i>Warehouse</i>	<i>NA</i>	<i>2-4 1>C A</i>

COMMENTS
NA COA ~~Guarantee~~ in warehouse

SECTION 2

RECIPIENT	TIME SAMPLE/CERTIFICATE TAKEN TO LAB
<i>John Smith</i>	

UNLOADED AT (tank number, unit, warehouse, etc.)

COMMENTS

SECTION 3

LAB TECHNICIAN	ACCEPT	REJECT	REASON FOR REJECTION

COMMENTS

SECTION 4

SHIFT SUPERVISOR	ACCEPT	REJECT	REASON FOR REJECTION

PLANT WEIGHT	UNLOADING TIMES	
NET <i>35.264</i>	START TIME	END TIME

COMMENTS

SNPE Chimie
GRUPE SNPE

Argucs : + 33 4 90 33 62 00 - Fax : + 33 4 90 33 63 26
 Toulouse : + 33 5 62 25 72 00 - Fax : + 33 5 62 25 72 15
 B.P. 4422 - 31405 Toulouse cedex

CERTIFICAT D'ANALYSE
Certificate of Analysis

N° ARC / Our ref.	N° FACTURE / Invoice	Date PAGE
LIV 653 2		05-10-01 1
REF. CLIENT / Your ref.		N° BL / Delivery List
40158031		11131

DESTINATAIRE FINAL / Delivery address

AVENTIS CROPS SCIENCE USA 2
C/O NSY WAREHOUSE
8921 FROST AVENUE
BERKELEY, MO
63134 U.S.A

Localisation adresse à l'emballage de : **ADRESSE DE FACTURATION / Invoice address**

AVENTIS CROPS SCIENCE S.A.
14-20 RUE PIERRE BAIZET

69263 LYON CEDEX 09

CODE ARTICLE CLIENT / DESCRIPTION / CONDITIONNEMENT / N° DES LOTS
 Your article n° / Description / Packaging / Batch number

2/4 DICHLOROANILINE pour cycle Weight Net/Brut 20000,00 / 22000,00

80 STEEL DRUM(S) 250
 enlevement client MSCU 114564-3

Lot/Batch 2001/54 CARACTERISTIC	Poids Net/Brut Weight Net/Gross UNITY	9000,00 / 9900,00		ACTUAL
		MIN.	MAX.	
molten product colourless to brow U visuel		YES	YES	YES
2,4-dichloroaniline To 10.61.98	%	99,0	100,0	99,9
2,5-dichloroaniline To 10.61.98	%	0,00	0,20	0,06
2,6-dichloroaniline To 10.61.98	%	0,00	0,10	0,00
3,4-dichloroaniline To 10.61.98	%	0,00	0,10	0,05
others impurities, sum (a)+(b)+(c) chlorides	% PPM	0,00 0	0,30 100	0,06 10
water To 05.14.90	%	0,00	0,10	0,01
Solidification point	°C	60,0	0,0	60,0

Lot/Batch 2001/55 CARACTERISTIC	Poids Net/Brut Weight Net/Gross UNITY	11000,00 / 12100,00		ACTUAL
		MIN.	MAX.	
molten product colourless to brow U visuel		YES	YES	YES
2,4-dichloroaniline To 10.61.98	%	99,0	100,0	99,8
2,5-dichloroaniline To 10.61.98	%	0,00	0,20	0,06
2,6-dichloroaniline To 10.61.98	%	0,00	0,10	0,00
3,4-dichloroaniline	%	0,00	0,10	0,06

Les valeurs ci-dessus sont le résultat des analyses effectuées à notre usine. Comptes rendus à votre insu ou à votre client, elles ne sauraient constituer une garantie en vue d'une utilisation courante du produit. La communication de ces valeurs de limite ne doit être cherchée de son propre accord de qualité à réception du produit.

The values above are the result of analyses carried out at our plant. They are given as an indication to our customers and should not, moreover be used as a guarantee vis-à-vis precise usage of the product. These values should not be used on their own, and you should in all cases carry out your own analytical test upon receipt of the product.

NPE Chimie

GRUPE SNPE

Tel : + 33 4 90 33 62 00 - Fax : + 33 4 90 33 63 26
 Tél : + 33 5 62 25 72 00 - Fax : + 33 5 62 25 72 15
 4422 - 31405 Toulouse cedex

CERTIFICAT D'ANALYSE Certificate of Analysis

N° ARC / Our ref. LIV 653 2	N° FACTURE / Invoice	Date PAGE 05-10-01 2
REF. CLIENT / Your ref. 40158031		N° BL / Delivery List 11131

DESTINATAIRE FINAL / Delivery address

**AVENTIS CROPSCIENCE USA 2
 C/O NSY WAREHOUSE
 8921 FROST AVENUE
 BERKELEY, MO
 63134 U.S.A**

Document extrait à l'adresse de : ADRESSE DE FACTURATION / Invoice address

**AVENTIS CROPSCIENCE S.A.
 14-20 RUE HIERE BAIZET
 69263 LYON CEDEX 09**

ODE ARTICLE CLIENT / DESCRIPTION / CONDITIONNEMENT / N° DES LOTS
 Our article n° / Description / Packaging / Batch number

To 10.61.98				
others impurities, sum (a)+(b)+(c)	%	0,00	0,30	0,09
chlorides	PPM	0	100	7
To 05.14.90				
water	%	0,00	0,10	0,03
To 09.11.88				
Solidification point	°C	60,0	0,0	61,0

Ce certificat ayant été réalisé par traitement informatique, sa signature est facultative.
 This certificate has been made by electronic dataprocessing and is therefore not necessarily signed.

Les valeurs ci-dessus sont le résultat des analyses effectuées à notre usine. Communiquées à titre indicatif à notre clientèle, elles ne sauraient constituer une garantie en vue d'une utilisation concrète du produit. La communication de ces valeurs ne libère pas notre clientèle de ses propres contrôles de qualité à réception du produit.

The values above are the result of analyses carried out at our plant. They are given as an indication to our customers and should not, moreover be used as a guarantee vis-à-vis precise usage of the product. These values should not be used on their own, and you should at all times carry out your own analytical test upon receipt of the product.



CERTIFICAT D'ANALYSE
Certificate of Analysis

Argues : + 33 4 90 33 62 00 - Fax : + 33 4 90 33 63 26
Toulouse : + 33 5 62 25 72 00 - Fax : + 33 5 62 25 72 15
P. 4422 - 31405 Toulouse cedex

N° ARC / Ord. ref.	N° FACTURE / Invoice	DATE PAGE
LTV 651 1		05-10-01 1
REF. CLIENT / Your ref.:		N° BL / Delivery Lot
40158031		11130

DESTINATAIRE FINAL / Delivery address

Document adressé à l'emission de : ADRESSE DE FACTURATION / Invoice address

AVENTIS CROPS SCIENCE USA 2
C/O NSY WAREHOUSE
8921 FROST AVENUE
BERKELEY.MD
63134 U.S.A

AVENTIS CROPS SCIENCE S.A.
14-20 RUE PIERRE BAIZET
69263 LYON CEDEX 09

CODE ARTICLE CLIENT / DESCRIPTION / CONDITIONNEMENT / N° DES LOTS
sur ordre n° / Description / Packaging / Batch number

2/4 DICHLOROANILINE pour cyclo Poids Net/Brut Weight Net/Gross 20000,00 / 22000,00
80 STEEL DRUM(S) 250
enlevement client CNC

Lot/Batch 2001/55 CARACTERISTIC	Poids Net/Brut Weight Net/Gross UNITY	3000,00 / 3300,00		ACTUAL
		MIN.	MAX.	
molten product colourless to brow U visuel		YES	YES	YES
2,4-dichloroaniline To 10.61.98	%	99,0	100,0	99,8
2,5-dichloroaniline To 10.51.98	%	0,00	0,20	0,06
2,6-dichloroaniline To 10.61.98	%	0,00	0,10	0,00
3,4-dichloroaniline To 10.61.98	%	0,00	0,10	0,06
others impurities, sum (a)+(b)+(c) chlorides	% PPM	0,00 0	0,30 100	0,09 7
water To 09.11.88	%	0,00	0,10	0,03
Solidification point	°C	60,0	0,0	61,0

Lot/Batch 2001/56 CARACTERISTIC	Poids Net/Brut Weight Net/Gross UNITY	17000,00 / 18700,00		ACTUAL
		MIN.	MAX.	
molten product colourless to brow U visuel		YES	YES	YES
2,4-dichloroaniline To 10.61.98	%	99,0	100,0	99,8
2,5-dichloroaniline To 10.61.98	%	0,00	0,20	0,06
2,6-dichloroaniline To 10.61.98	%	0,00	0,10	0,00
3,4-dichloroaniline	%	0,00	0,10	0,06

Les valeurs ci-dessus sont le résultat des analyses effectuées à notre usine. Communiquées à titre indicatif à nos clients, elles ne sauraient constituer une garantie en vue d'une utilisation concrète du produit. La communication de ces valeurs ne libère pas notre clientèle de ses propres contrôles de qualité à réception du produit.

The values above are the result of analyses carried out in our plant. They are given as an indication to our customers and should not, whatever be used as a guarantee vis-à-vis precise usage of the product. These values should not be used on their own, and you should in all cases carry out your own analytical test upon receipt of the product.

SNPE Chimie

GROUPE SNPE

Argues : + 33 4 90 33 62 00 - Fax : + 33 4 90 33 63 26
 Toulouse : + 33 5 62 25 72 00 - Fax : + 33 5 62 25 72 19
 .P. 4422 - 31405 Toulouse cedex

CERTIFICAT D'ANALYSE Certificate of Analysis

N° ABC / Our ref.	N° FACTURE / Invoice	Date PAGE
LIV 661 1		05-10-01 2
REF. CLIENT / Your ref.		N° BL / Delivery Lot
40158031		11130

DESTINATAIRE FINAL / Delivery address

AVENTIS CROPSCIENCE USA 2
 C/O NSY WAREHOUSE
 8921 FROST AVENUE
 BERKELEY.MO
 63134 U.S.A

Document adressé à l'attention de : **ADRESSE DE FACTURATION / Invoice address**

AVENTIS CROPSCIENCE S.A.
 14-20 RUE PIERRE BAIZET

69263 LYON CEDEX 09

IDÉ ARTICLE CLIENT / DESCRIPTION / CONDITIONNEMENT / N° DES LOTS
 or article n° / Description / Packaging / Batch number

To 10.61.98			
others impurities, sum (a)+(b)+(c)	%	0,00	0,30
chlorides	PPM	0	100
To 05.14.90			
water	%	0,00	0,10
To 09.11.88			
Solidification point	°C	60,0	0,0

Ce certificat ayant été réalisé par traitement informatique, sa signature est facultative.
 This certificate has been made by electronic dataprocessing and is therefore not necessarily signed.

Les ci-dessus sont le résultat des analyses effectuées à notre usine. Communiquées à titre indicatif à notre clientèle, elles ne sauraient constituer une garantie en tant qu'usage de contrôle de produit. La communication de ces valeurs ou limites par votre clientèle de son propre accord de qualité à réception de produit.

Our above are the result of analyses carried out at our plant. They are given as an indication to our customers and should not, however be used as a guarantee vis-à-vis usage of the product. These values should not be used on their own, and you should in all cases carry out your own analytical work upon receipt of the product.

71020

ORIGINAL NON-NEGOTIABLE



FROM TETRA BROMINE & DERIVATIVES 49 PHILLIPS ROAD 311	AT HELENA, AR	DATE SHIPPED: 9/12/01	BILL OF LADING NUMBER 003654-01
--	-------------------------	---------------------------------	---

NAME OF CARRIER PLESS	CUSTOMER PURCHASE ORDER NUMBER NO CHARGE - SAMPLE
---------------------------------	---

The property described herein, to whatever good order, except as noted (contents and condition of packages indicated, marked, consigned, and described in bill of lading), which shall remain the same until the goods are delivered to the consignee, shall be deemed to be in the custody of the carrier from the time of delivery to the consignee until the goods are delivered to the consignee. It is mutually agreed as to each party to all of any of said property may at any portion of said route to destination, and as to each party at any time to be carried by air or any other mode of conveyance, that the carrier shall be subject to all the terms and conditions of the Uniform Domestic Storage Bill of Lading and Rules (U) in Effect, Houston, Houston and Alaska Pacific Oceanways or other air carrier, to be in a bill of lading or other document or to be in a bill of lading or other document or to be in a bill of lading or other document. The carrier hereby certifies that it is familiar with all the laws and regulations of the state of Texas and the laws and regulations of the United States and the laws and regulations of the United States and the laws and regulations of the United States and the laws and regulations of the United States.

CONSIGNEE TO:
ASHEVILLE LUBRICANTS & CHEMICALS
611 WAREHOUSE COURT
TAYLORS, SC
29687
ATTN.: KAYLE BOND (864) 268-8967

SALES COST CENTER
3809

BOAT, RAILCAR, CONTAINER OR TRUCK/TRAILER NUMBER

GROSS -
TARE -
NET -

DESTINATION
TAYLORS SC

MAIL FREIGHT BILL TO:
TETRA BROMINE
ATTN.: TRANSPORTATION MANAGER
PO BOX 73087
HOUSTON TX 77273

IN THE EVENT OF AN EMERGENCY CONCERNING THIS SHIPMENT, CALL CHEM TREE 1-800-424-9300 ANYTIME

Subject to section 7 of Conditions of Carriage of Goods by Air, if the goods are to be delivered to the consignee at the consignee's expense, the consignee shall sign the following statement:
The carrier shall not make delivery of this shipment without payment of freight and all other bills charges.
(Signature of Consignee)

PREPAID

QUANTITY	HM	DESCRIPTION OF ARTICLES SPECIAL MARKS AND EXCEPTIONS	WEIGHT	LOT NUMBER
700.00 (1 DRUM)	X	FlameRid B53P Environmentally hazardous substance, liquid, n.o.s. (contains Triaryl Phosphates), 9, UN3082, PG III Call in advance to schedule delivery. CL70 QUOTE 1589161 CHEMICALS 3RD PARTY BILLING: PLESS TRAFFIC SALES, INC. P.O. BOX 87 RUTHERFORD, NJ 07070	700.00	
		Quantity of materials have been received in good condition.		
		By _____ Date _____ (CUSTOMER'S SIGNATURE)		
		Company _____		

This is to certify that the above named materials are properly classified, described, packaged, marked and labeled, and are in proper condition for transportation according to the applicable regulations of the Department of Transportation.

SHIPPER'S SIGNATURE: <i>Jane Perry</i>	DATE: 9/11/01	CARRIER'S SIGNATURE: <i>[Signature]</i>	DATE: 9/14/01	MSDS RECEIVED to/for
--	-------------------------	---	-------------------------	------------------------------------

PERMANENT POST OFFICE ADDRESS OF SHIPPER, P.O. BOX 73087, HOUSTON, TX 77273 (281) 367-1983

TETRA Technologies, Inc.
Fluids Division - Bromine & Derivatives
25025 I-45 North, The Woodlands, Texas 77380
P.O. Box 73087, Houston, Texas 77273

**FACSIMILE COVER SHEET**

Date: September 12, 2001 Pages to Follow: 1
To: Lisa Walker Fax No: (870) 572-3795
From: Art Patterson Contact Phone No: (281) 364-4358
Contact Name: _____ Fax No: (281) 298-6217

Remarks:

Lisa,

Attached is a bill of lading for one drum of B53P. Please release it to the trucking company that calls to schedule the pick-up. Freight is being arranged by PLESS.

Thanks,

A handwritten signature in black ink that reads "Art Patterson". The signature is written in a cursive style with a long, sweeping underline.

Art Patterson

Privileged and Confidential

This transmission (including all attached pages) is intended only for the use of the named recipient(s), and may contain information that is privileged or exempt from disclosure under applicable law. If you are not a named recipient, you are hereby notified that any use, dissemination, distribution, or copying of this transmission is strictly prohibited. If you have received this transmission in error, please destroy all copies and notify us immediately.

AB0000028814

PACKING SLIP

JOB NUMBER: 216518 DATE: 09-07-01

CUSTOMER: AVENTIS CROPSCIENCE SHIP TO:

ATTN: CEDAR CHEMICAL CORP. 646
49 PHILLIPS ROAD #311

DURHAM NC HELENA AR
27709 72342

P.O. NUMBER: 643324

THIS SHIPMENT CONTAINS

2175 CYCLANILIDE 50 KG DRUM LABEL
ACS 23994A/3100 12/00

1 CTN @ 2175

SEP 11 2001

2175

TOTAL = 2175

WRITTEN BY: JL
PACKED BY: XX
SHIPPED BY:
RECEIVED BY:

A. FREIGHTWAYS

James Park

Green

PRINTING COMPANY, INC.
P. O. Box 1167 / Lexington, N. C.

RECEIVED RECEIPT

Freight Bill # 067035883 RC TNBR#:		CONSIGNEE CEDAR CHEMICAL 49 PHILLIPS RD 311 HWY 242 HELENA AR 72342		SHIPPER GREEN PRINTING CO INC 101 LEXINGTON PKY LEXINGTON NC 27295					
Date: 09/07/2001									
H/U	PCS	HM	DESCRIPTION	WGT-LBS	NMFC	PCF CLASS	RATE	CHARGES	
	1		PO# NS PRINTED MATTER 000150 FUEL SURCHG LTL SHPT3.00% ** FAK RATES APPLIED **	139	161870-00	070			
1	1		PREPAID - WILL INVOICE THIRD PARTY	139					
ANY ADDITIONAL SERVICES MAY RESULT IN ADDITIONAL CHARGES* CHARGES SUBJECT TO CHANGE*								B/L # NS	0.00

PACKING SLIP

JOB NUMBER: 216231 DATE: 08-29-01
CUSTOMER: SHIP TO:
AVENTIS CROPSCIENCE CEDAR CHEMICAL CORP. 640
ATTN: 49 PHILLIPS ROAD #311
DURHAM NC HELENA AR
27709 72342
P.O. NUMBER: 643324

THIS SHIPMENT CONTAINS

2200 CYCLANILIDE 50KG DRUM LABEL
ACS 123499A/3100 12/00

2 CTNS @ 1025 / 1 CTN @ 150 2200

SEP 4 2001

TOTAL = 2200

WRITTEN BY: JL
PACKED BY: XX
SHIPPED BY: UPS
RECEIVED BY: _____

Green

PRINTING COMPANY, INC.
P. O. Box 1167 / Lexington, N. C



FACSIMILE TRANSMITTAL SHEET

TO: Lisa Walker	FROM: Craig Dodson (craig.dodson@aventis.com)
COMPANY: Cedar	DATE: August 20, 2001
FAX NUMBER: (870) 572-3795	TOTAL NO. OF PAGES INCLUDING COVER: 2
PHONE NUMBER: (870) 572-3701	SENDER'S FAX NUMBER: (919) 549-2200
RE: Cyclanilide STO's	SENDER'S PHONE NUMBER: (919) 549-2017

URGENT
 FOR REVIEW
 PLEASE COMMENT
 PLEASE REPLY
 PLEASE RECYCLE

NOTES/COMMENTS:

Lisa,

Here is the back up from RTP, St. Louis Plant, NSY Warehouse and Savannah. The numbers add up to 2,258 drums or 112,900 kgs. Please check your production numbers.

Thanks,
Craig

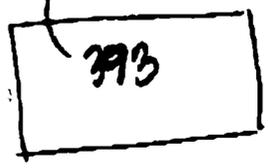
P. O. BOX 12014
 RESEARCH TRIANGLE PARK NC 27709

AB0000028814

US82 - STL (formulator) VM

5/8	80096435	3drm
6/14	80104459	130
6/14	80104460	130
7/16	80109215	130

393 drm =
19,650 kg



US89 - NSY (w/ncse)

6/19	80105389	130
6/19	80105390	130
6/19	80105393	130
6/19	80105394	130
6/19	80105391	130
6/19	80105392	130
6/28	80107047	130
5/7/16	80109216	130
7/20	80110040	130
7/20	80110039	130
7/20	80110038	130
7/20	80110037	130
7/26	80110888	130 44
7/26	80110887	130

will call
back w/#
1,734 ✓

USC1 - Savannah
(RICK) OR DONNA

7/26	80110886	130 drm
		OK ✓
		= 6,500 kg

1734 ~~130~~ drm =
86,700 ~~91,000~~ kg

RTP

5/9	80096083	1 dram
		= 50 KG

1734
393
130
1
2258 drams = 112,900 KGs



STRAIGHT BILL OF LADING - SHORT FORM

Received, subject to all terms and conditions of the contract in effect between shipper and Carrier on the date of issue of this Bill of Lading, the property described herein is apparent good order except as noted. In the event no contract is in effect, the Terms and Conditions of the Uniform Domestic Straight Bill of Lading as set forth in the appropriate red or white classification shall apply.

CONSIGNEE:

AVENTIS CROPSCIENCE USA LP
 % WRIGHT DISTRIBUTION CENTER INC
 1-75 EXIT 122
 1000 HANTHORN RD
 LIMA OH 45804
 USA

CONSIGNOR (SHIPPER):

Aventis CropScience USA LLP
 c/o Cedar Chemical Corporation
 49 Phillips Road #311
 Helena AR 72342
 USA

B/L NO.

80098430

Page: 1 of 1

Date: May 09, 2001
 CARRIER: ATS INC

VEHICLE NO.:

FREIGHT CHARGES: Prepaid

Carrier: Attach memorandum copy of Bill of Lading to Freight Bill and air

AVENTIS CROPSCIENCE C/O FTS
 C/O FTS FREIGHT PAYMENT PLAN
 P. O. BOX 1259
 SOMERVILLE NJ 08876-1259

24 HOUR EMERGENCY TELEPHONE NUMBER:

1-800-424-9300

SEAL NOS. _____

QUANTITY	MATERIAL ID / HR	DESCRIPTION	CLASS	ID	P.C.	UNIT WT	WEIGHT
72 Drums	109671	X DICHLOROANILINE, SOLID RD(2,4-DICHLOROANILINE) MARINE POLLUTANT INSECTICIDES OR FUNGICIDES, N.O.I., OTHER THAN POISON 2,4-DCA (2,4-DICHLOROANILINE) 1x200kg net	6.1	UN1590	II	153	31,746 LBS

This is to certify that the above-named materials are properly classified, described, packaged, marked and labeled, and are in proper condition for transportation according to the applicable regulations of the Department of Transport

TOTAL SHIPPING UNITS

PLACARDS REQUIRED:

DECLARED VALUE OF SHIPMENT

PLACARDS SUPPLIED:

YES NO-FURNISHED BY CARRIER

HAZARD SUPPLIED:

YES NO-FURNISHED BY CARRIER

DRIVER'S SIGNATURE _____

TOTAL WEIGHT

18,720 LB

Aventis
 P.O. Box 12514
 62 T.W. Alexander Drive
 Research Triangle Park, North Carolina 27709

D AMOUNT
 O PER
 D TOTAL

Date: _____

Date: _____

	A	B	C	D	E	F	G	H	I	J	L	M	N	O	P	Q	R	S
1	CEDAR - WEST HELENA																	
2	Raw materials used - Finish goods used - Packaged - Mfg -																	
3																		
4	11/30/2001																	
5																		
6		Item No	Std	Usage	Raw	Materials	Used	Finish Goods										
7			Factor	Factor	Used	Used		Pkg'd	Mfg'd					Dr				Cr
8	DCA	3020							892,978									
9	DCCB	41000	1.1300	1.0388	827,590						S	701	1420	1,321,607.44	C	153	6740	(1,321,607.44)
10	Nitric Acid	41020	.4970	0.4458	398,127						C	153	6520	298,828.80	S	703	1460	(298,828.80)
11	Sulfuric Acid	41010	.8550	0.8317	742,872						C	153	5540	63,700.32	S	705	1460	(63,700.32)
12	Soda Ash	41050	.0110	0.0005	478						C	153	5850	29,706.88	S	704	1460	(29,706.88)
13	Plat/Carb Cat	41070	.0003											3,151.56	S	708	1460	(61.88)
14	Hydrogen	41030	.0510	0.0480	42,854						C	153	5570	51,424.80	S	706	1460	(51,424.80)
15	50% Rayon Caustic	45090	.0182	0.0121	10,821										S	792	1460	(865.68)
16	Lime	41060	.0305	0.0282	25,200										S	709	1460	(1,764.00)
17	Ferrous Sulfate		.0001	0.0001	48													
18	TEPA		.0008	0.0011	1,024													
19	Hydrogen Peroxide	41080	.0050	0.0022	2,000										S	790	1460	(460.00)
20	Methanol	42840													S	735	1460	
21																		
22	Propanol Tech	3000							1,037,770									
23	DCA-3rd Party	40100	0.7550								S	702	1420	1,317,967.80	C	154	6740	(1,317,967.80)
24	DCA-Cedar	3020	0.7550	0.7430		771,020					C	154	5830	1,141,109.60	S	710	1460	
25	P Acid	40200	0.3707	0.5891	611,304						C	154	6840	177,278.16	S	701	1420	(1,141,109.60)
26	P Anhy	40300	0.0190								C	154	5650		S	712	1460	(177,278.16)
27																		
28	Plated Tech	3050							638,500									
29	P Tech	3000	1.000	1.000		638,500					C	154	5840	705,435.00	S	714	1460	(705,435.00)
30																		
31	#8	3200									S	802	1420		C	155	6740	
32	P Tech	3000	3.2158								C	154	6810	683,895.00	S	702	1420	(683,895.00)
33	Isoph	40500	2.2500								C	161	5680		S	717	1460	
34	Aromatic B	40800	1.8120								C	161	5685		S	718	1460	
35	Emul	40800	1.2683								C	161	5675		S	720	1460	
36	Sun Oil	41640	0.4300								C	161	5850		S	769	1460	
37	MO	40400									C	161	5680		S	718	1460	
38	Emul	40500	0.0143								C	161	5670		S	718	1460	
39	Tenneco 600	45320									C	161	5685		S	787	1460	
40	Come Blend																	
41	Stepfac																	
42																		
43	#8	3300									S	817	1420		C	162	6740	
44	P Tech	3000	4.1500								C	162	6810		S	702	1420	
45	F Tech	3050									C	162	6835		S	804	1420	
46	Isoph	40500	0.7200								C	162	5680		S	717	1460	
47	M O	40400	2.7400								C	162	5660		S	718	1460	
48	Emul	40500	0.9250								C	162	5670		S	718	1460	
49	Isol/Milb	41080									C	162	5780		S	721	1460	
50	Aromatic B	40800									C	162	5685		S	719	1460	
51	Emul	40900									C	162	5675		S	720	1460	
52																		
53	#8 X	3300									S	817	1420		C	162	6740	
54	P Tech	3000	4.1270								C	162	6810		S	702	1420	
55	M O	40400	1.7620								C	162	5660		S	718	1460	
56	Isoph	40500	1.6880								C	162	5680		S	717	1460	
57	Emul	40500	0.7820								C	162	5670		S	718	1460	
58	Aromatic B	40800	0.0503								C	162	5685		S	719	1460	
59	Emul	40900	0.3944								C	162	5675		S	720	1460	
60	Sun Oil	41640	0.3041								C	162	5850		S	769	1460	
61																		
62	RiceSolo	3130									S	861	1420		C	168	6740	
63	P Tech	3000	3.1300								C	168	6810		S	702	1420	
64	MoMatz	41780	3.1300								C	168	5715		S	828	1460	
65	Emul	40800	0.9000								C	168	5670		S	718	1460	
66	WR Emul	40610													S	829	1460	

	A	B	C	D	E	F	G	H	I	J	L	M	N	O	P	Q	R	S
67	Aromatic B	40800	2.4900								C	188	5685		S	719	1460	
68																		
69	Arrosolo	3170									S	894	1420		C	132	6740	
70	P Tech	3000									C	132	6810		S	702	1420	
71	Ordram																	
72	WR Emul	40610									C	132	5670		S	829	1460	
73	Aromatic B	40800									C	132	5685		S	719	1460	
74																		
75	Mollnate 72(6#)	3100									S	665	1420		C	156	6740	
76	Mollnate Tech	41760									C	156	5715		S	828	1460	
77	Wt Emulsifier	40810									C	156	5670		S	829	1460	
78	Aromatic B	40800									C	156	5685		S	719	1460	
79																		
80																		
81		Item No	Std	Usage	Raw	Used	Finish Goods											
82			Factor	Factor	Materials		Pkg'd	Mfg'd							Dr			Cr
83	Stam	3400						114,557			S	811	1420	902,709.16	C	170	6740	(902,709.16)
84	P Tech	3000	4.1270	4.1561		476,110					C	170	6810	604,659.70	S	702	1420	(604,659.70)
85	F Tech	3050									C	170	6835		S	804	1420	
86	Isoph/Mibk	41080	3.9280	3.9083	447,720						C	170	5780	232,814.40	S	721	1460	(232,814.40)
87	Emul	40600	0.8030	0.6954	102,560						C	170	5670	71,806.00	S	719	1460	(71,806.00)
88	Isoph	40500									C	170	5680		S	717	1460	
89	MO	40400									C	170	5660		S	716	1460	
90																		
91		Item Description	Item No			Total Qty's												
92						R/M's	FG's											
93		Propanil Tech	3000				1,014,610											
94		Flake Tech	3050															
95		M O	40400															
96		Isoph	40500															
97		Emul	40600			102,560												
98		Emul C6173	40810															
99		Aromatic B	40800															
100		Amul	40900															
101		Isoph/Mibk	41080			447,720												
102		Sun Oil	41640															
103		Mollnate	41760															
104		Tenneco 500	45320															
105		Ordram																
106																		
108	3# Packaged:	Item No				Mt Drms	Bulk	Full Drms										
107	3# 50L	3190	13.210								S	854	1420		C	167	6740	
109	3# 55's	3210	55.000								S	806	1420					
109	3# 200L's	3250	52.840								S	807	1420					
110	Propanil 360 210L's	10020	55.480								S	826	1420					
111	3# Bulk	3200									C	167	6820		S	802	1420	
112	3# 20L Used	3220													S	819	1420	
113	3# 200L Used	3250													S	807	1420	
114	35's	42210									C	1067	5890		S	738	1460	
115	55M's	42300													S	742	1460	
116	65 Mt's Black	42550													S	756	1460	
117	3# 20L	3220	6.280								S	819	1420		C	160	6740	
118	3# Bulk	3200									C	160	6820		S	802	1420	
119	Mt 20L	42000									C	1060	5890		S	739	1460	
120	4# Packaged:	Item No				Mt Drms	Bulk	Full Drms										
121	Propanil 4# 20L	3290	5.280								S	812	1420		C	169	6740	
122	4# 55's	3310	55.000								S	818	1420					
123	Propanil 4# 210L	3320	55.480								S	838	1420					
124	Propanil 4# 200L	3330	52.840								S	839	1420					
125	Cedar Blue Drum 35 gal	3340	35.000								S	814	1420					
126	4# bulk	3300									C	169	6830		S	817	1420	
127	35 mt's	42210									C	1069	5890		S	738	1460	
129	Mt 20L	42000													S	739	1460	
128	35 mt's Plastic	42230													S	783	1460	
130	55 mt's	42300													S	742	1460	
131	55 mt's	42550													S	756	1460	
132	Stam Packaged:	Item No				Mt Drms	Bulk Used	Full Drms										

A	B	C	D	E	F	G	H	I	J	L	M	N	O	P	Q	R	S
133	Stam 35's	3420	35,000			2,575				S	813	1420	776,877.50	C	172	6740	(776,877.50)
134	bulk	3400		90,125		80,125				C	172	6825	710,185.00	S	811	1420	(710,185.00)
135	35 m's	42220				2,575				C	1072	5890	38,625.00	S	780	1460	(38,625.00)
136	RiceSolo Packaged:	Item No			Mt Drms	Bulk Used	Full Drms										
137	RiceSolo 30's	3080	30,000							S	862	1420		C	168	6740	
138	bulk	3130								C	168	6855		S	861	1420	
139	30 m's	42100								C	1068	5890		S	752	1460	
140	Arrosolo Packaged:	Item No			Mt Drms	Bulk Used	Full Drms										
141	Arrosolo 30's	3410	30,000							S	896	1420		C	132	6740	
142	Arrosolo bulk used	3170								C	132	6856		S	894	1420	
143	30 m's	42100								C	1032	5890		S	752	1460	
144	Molinate 68 Packaged:																
145	Molinate 68 200L	3150								S	868	1420		C	156	6740	
146	Bulk	3100								C	168	6740		S	865	1420	
147	55 m's	42300								C	1058	5890		S	758	1460	
148	Duron Prod'n:	Item No	Std	Act	R/M Used		F/G Prod										
149	Duron Standard Grade	3030					20,000			S	816	1420	44,800.00	C	157	6740	(44,800.00)
150	Duron B Grade	3040								S	844	1420					
151	DCPI	40150	0.8340	0.7733	15,465					C	157	5835	40,363.65	S	715	1460	(40,363.65)
152	DMA	41650	0.2100	0.2080	4,160					C	167	5810	2,662.40	S	744	1460	(2,662.40)
153	Heptane	41660	0.0716	0.3900	7,800					C	167	5850	1,638.00	S	745	1460	(1,638.00)
154	Sulfuric Acid	41520												S	762	1460	
155	50% Rayon Caustic	45080												S	792	1460	
156	2AB Prod'n:	Item No	Std	Act	R/M Used		F/G Prod										
157	2AB	17380					9,035			S	911	1420	122,062.85	C	183	6740	(122,062.85)
158	1-NP	48330								C	183	6736		S	848	1460	
159	Formaldehyde	41540								C	183	5850		S	764	1460	
160	TEA	48340												S	849	1460	
161	Raney Nickel	42680												S	788	1460	
162	Methanol	42640												S	735	1460	
163	Sulfuric Acid	41010								C	183	5530		S	704	1460	
164	Hydrogen	41030								C	183	5570		S	708	1460	
165	DCPI Packaged:	Item No	Std	Act	R/M's	F/G's	Cases	Gals/Lbs									
166	DCPI 550# Drummed	3140								S	863	1420		C	133	6740	
167	DCPI Bulk Used	40150								C	133	6635		S	715	1460	
168	DCPI Produced (PPG):	Item No	Std	Act	R/M's	F/G's	Cases	Gals/Lbs									
169	DCPI Produced	40160						52,929		S	715	1460	138,144.69	C	133	6740	(138,144.69)
170	DCA Used	3020		0.9171		48,541				C	133	6840	71,840.68	S	701	1420	(71,840.68)
171	Acidfluorfen Prod'n:	Item No	Std	Act	R/M Used		F/G Prod										
172	Acidfluorfen	5120					41,068	100% AI kg									
173	Mixed Nitrating Acid	41700								C	182	5850	5,323.10	S	806	1460	
174	Nitric Acid	41020	0.2600	0.1171	4,808					C	182	5540	769.28	S	705	1460	(769.28)
175	Acetic Anhydride	41710	0.7200	0.2165	8,850									S	807	1460	(3,363.00)
176	Sulfuric Acid	41010	0.2400	0.0431	1,770					C	182	5530	70.80	S	704	1460	(70.80)
177	Ethylene Dichloride	41720												S	808	1460	
178	Peritone D	41740	0.1200											S	826	1460	
179	50% Caustic	45090	1.2000	0.5946	24,420									S	792	1460	(1,953.60)
180	R118118	80200	3.5400	0.4018	18,500												
181	Soda Ash	41050		0.0012	50									S	708	1460	(6.50)
182	TA Prod'n:	Item No	Std	Act	R/M Used		F/G Prod										
183	TA Prod'n:	17000					72,081			S	849	1420	309,948.30	C	183	6740	(309,948.30)
184	Nitromethane	42680	7600	1612	11,619					C	183	5560	16,034.22	S	787	1460	(16,034.22)
185	Formaldehyde	41540	2.5000	8808	64,208					C	183	5590	7,704.98	S	764	1460	(7,704.98)
186	50% Rayon Caustic	45080		.0022	160												
187	Sulfuric Acid	41010															
188	50% Caustic	45090	1000											S	792	1460	
189	Methanol	42640	2460							C	183	5850		S	735	1460	
190	Hydrogen	41030	1420	.0610	4,397					C	183	5570	5,276.40	S	708	1460	(5,276.40)
191	Raney Nickel	42680	.0110							C	183	5600		S	788	1460	
192	Sulfuric Acid	41520	.0660											S	762	1460	
193	Mt 55's	42510								C	127	5880		S	631	1460	
194	Cyclanilide Prod'd	Item No	Std	Act	R/M Used		F/G Prod										
195	Cyclanilide	5170															
196	Wet Cake	xxxxx															
197	2,4 DCA	xxxxx															
198	CPDM	xxxxx															

	A	B	C	D	E	F	G	H	I	J	L	M	N	O	P	Q	R	S
189	Xylene	41200									S	9100	1230		S	751	1480	
200	Sodium Methoxide	10000x																
201	Formic Acid	48240									S	9100	1230		S	836	1480	
202	50% Caustic	41530									S	9100	1230		S	769	1480	
203	Wet Calc	10000x																
204	MT 30's	10000x																
205	Specificity Products	Item No	Std	Act	R/M Used			F/G Prod										
206	Erruleifer C6173	40610			227,876						C	180	5850	159,582.50	S	829	1460	(159,582.50)
207	Mixed Nitrating Acid	40600			118,730						C	180	5850	27,307.80	S	719	1480	(27,307.80)
208	30 Mts	42100			3,807						C	180	5850	60,340.85	S	752	1480	(60,340.85)
209																		
210	Packaged Pharm:	Item No	Std	Act	R/M's	F/G's	Cases	Gals/Lbs										
211	DCA Pkg'd:																	
212	DCA 550#s	3010									S	703	1420		C	153	6740	
213	Bulk	3020									C	153	6840		S	701	1420	
214	MT 55's	42550									C	1053	6870		S	756	1480	
215	Plant:																	
216	Pure Trom 25 Kg Pkg'd	17120	55.120								C	183	6740		S	849	1420	
217	Tris Ultra Pure Bulk kg	17350									S	872	1420		C	177	6740	
218	Tromethamine Bulk Used	17000									C	177	6860		S	849	1420	
219	Trometamol 25 Kg	17220									S	845	1420		C	181	6740	
220	Trometamol 50 Kg	17240									C	181	6740		S	847	1420	
221	Tris Ultra Pure 100Kg	17250	220.480								C	181	6740		S	853	1420	
222	Pure Tris-Hcl 100Kg	17260	220.480								C	177	6740		S	859	1420	
223	Tris Ultrapure 25kg	17270	55.120								C	181	6740		S	859	1420	
224	Tromethamine Bulk Used	17000									C	181	6860		S	849	1420	
225	Tris UP Kgs Pkg'd (Plant)	17350									S	872	1420		C	177	6740	
226	Tromethamine Bulk Used	17000									C	183	6740		S	849	1420	
227	MPS:																	
228	Pure Trom 25 Kg Pkg'd	17120	55.120				1,700	42,500			S	843	1420	409,275.00	C	183	6740	(409,275.00)
229	Tromethamine Bulk Used	17000		93,704							C	183	6860		S	849	1420	
230	Tris Ultrapure 25kg Used	17270	55.120								C	181	6740		S	859	6740	
231	Tromethamine 50# Pkg'd	17130	50.000								S	873	1420		C	183	6740	
232	Tromethamine Bulk Used	17000				100,090					C	183	6860	430,387.00	S	849	1420	(430,387.00)
233	Tris UltraPure 25Kg Pkg'd	17270									S	859	1420		C	177	6740	
234	Tris UltraPure Bulk Used	17350	55.115								C	177	6860		S	864	1420	
235	Tromethamine 50# Used	17130	50.000								C	183	6860		S	873	1420	
236	Tromethamine Bulk Used	17000									C	183	6860		S	849	1420	
237	Tris Hcl 25Kg Pkg'd	17280									S	876	1420		C	181	6740	
238	Pharms:																	
239	Tris Hcl Bulk Prod	17290	55.115					8,434			C	179	6740	(55,411.38)	S	884	1420	55,411.38
240	Tris Ultrapure 25kg Used	17270	55.120				71				C	179	6860	24,850.00	S	859	1420	(24,850.00)
241	Tris Hcl Bulk Used	17280									C	179	6860		S	884	1420	
242	Tris Ultrapure 25kg	17270	55.120								C	177	6740		S	859	1420	
243	Tromethamine Bulk Used	17000				3,375					C	179	6860	14,512.50	S	849	1420	(14,512.50)
244	Tris Hcl 25Kg Pkg'd	17280					182	3,800			C	179	6740	(55,594.00)	S	876	1420	55,594.00
245	Tromethamine Bulk Used	17000									C	179	6860		S	849	1420	
246	Tham 25 kg Used	17020									C	179	6860		S	842	1420	
247	Tris Hcl Bulk Used	17290									C	179	6860		S	884	1420	
248	Tris UltraPure Bulk Used	17350	55.115			454					C	179	6860	6,642.02	S	872	1420	(6,642.02)
249	Tris UltraPure Bulk Prod	17350									C	177	6740		S	872	1420	
250	Tris UltraPure Bulk Used	17350	55.115								C	177	6860		S	872	1420	
251	Hepes NA Bulk kg	17480									S	910	1420		C	196	6740	
252	Hepes Solution Used	48320									C	196	5850		S	847	1480	
253	Cycloate Packaged (Pharms):	Item No	Std	Act	R/M's	F/G's	Cases	Gals/Lbs										
254	Cycloate 200 Kg Pkg'd	3520									S	879	1420		C	491	6740	
255	Cycloate Bulk Used	3840									C	491	6740		S	880	1420	
256	Wham Packaged:	Item No	Std	Act	R/M's	F/G's	Cases	Gals/Lbs										
257	Wham 2x2.5	3180									S	832	1420		C	164	6740	
258	Wham 100L	3230									S	828	1420					
259	Wham 30	3240									S	805	1420					
260	S Wham 30	3360									S	831	1420					
261	S Wham 2x2.5s	3360									S	834	1420					
262	S Wham Bulk	3370									S	858	1420					
263	S Wham 2x2.5s Used	3360									C	164	6835		S	834	1420	
264	Flaked Tech	3050	4.1240								C	164	6835		S	804	1420	

	A	B	C	D	E	F	G	H	I	J	L	M	N	O	P	Q	R	S	
265	Flaka Tech 25Kg Used	3080																	
266	Morwet	41480	0.0970												S	822	1420		
267	Polyfon O	41470	0.0100												S	726	1460		
268	Glycerine	41480	0.2430												S	727	1480		
269	Kelzan	41510	0.0060												S	728	1460		
270	Veegum	41570	0.1170												S	761	1490		
271	Technical Cerbyl	41670	0.0070												S	731	1480		
272	Ethephon	41680	0.0400												S	767	1460		
273	Soprophor 4D384	41680	0.1460												S	791	1460		
274	Glutaraldehyde	41750													S	809	1480		
275	Antifoam DC 1500	45140	0.0010												S	827	1460		
276	Alfonio	41490	0.3890												S	785	1460		
277	Proxel	41730													S	729	1460		
278	Formaldehyde														S	825	1460		
279	Citric Acid	41580													S	767	1460		
280	30 m's	42100									C	184	5870		S	752	1480		
281	30 m's @ Pachuta	42100													S	752	1460		
282	2.5 m's	44200													S	759	1460		
283	Duet Packaged:	Item No	Std	Act	R/M's	FG's	Cases/Drums	Gals/Lbs											
284	Duet 30	3430									S	823	1420		C	159	6740		
285	Duet 2x10L	3390									S	888	1420						
286	Flaked Tech	3050									C	189	6939		S	804	1420		
287	Flaka Tech 25Kg Used	3060													S	822	1420		
288	Morwet	41480									C	159	5850		S	726	1460		
289	Polyfon O	41470													S	727	1460		
290	Glycerine	41480													S	728	1460		
291	Kelzan	41510													S	761	1460		
292	Veegum	41570													S	731	1460		
293	Ethephon	41680													S	791	1460		
294	Soprophor	41680													S	809	1460		
295	Glutaraldehyde	41750																	
296	Antifoam	45140													S	785	1460		
297	Bensulfuron Methyl Tech																		
298	Proxel	41730													S	825	1460		
299	Formaldehyde																		
300	30 m's	42100									C	159	5870		S	752	1480		
301	Total Flaked Tech Used	3050																	
302	Sutan+6.7E Produced & Packaged:																		
303	Sutan 2x2.5	3550									S	877	1420		C	135	6740		
304	Bulylate Tech	46230									C	135	5850		S	838	1460		
305	Kerosene	46270													S	840	1460		
306	Dichlorid (kg)	46120													S	833	1460		
307	AU-666	46260													S	839	1460		
308	2.5 gal jug																		
309	Repose/Repose T Produced & Packaged:	Item No	Std	Act	R/M's	FG's	Cases/Drums	Gals/Lbs											
311	Repose 2x2.5	3630									S	878	1420		C	140	6740		
312	Repose T 2x2.5	3690									S	898	1420		C	140	6740		
313	Repose T bulk gal	3820						1,515			S	915	1420	26,573.10	C	140	6740	(26,573.10)	
314	Aromatic 200	46280			12,054						C	140	5850	5,346.43		S	844	1460	(3,254.58)
315	Pendimethalin	3110				9,240					C	140	6857	30,030.00		S	857	1420	(30,030.00)
316	AU-646	48310			1,619										S	846	1460	(2,091.85)	
317	2.5 gal jug																		
318	Shroud Produced & Packaged:																		
319	Shroud 2x2.5	3680									S	897	1420		C	142	6740		
320	Aromatic 200	46280									C	142	5850		S	844	1460		
321	Monochlor Toulene	46280													S	843	1460		
322	AU-667 Emulsifier	46300													S	845	1460		
323	Atachlor Tech	3540									C	142	6858		S	882	1420		
324	2.5 gal jug																		
325	Ro-Neet Produced:																		
326	Ro-Neet	3490									S	875	1420		C	490	6740		
327	Cycloate Tech	3840									C	490	6859		S	880	1420		
328	Cycloate Tech 200 kg	3520													S	879	1420		
329	Sporto 221ER	41780									C	490	5850		S	841	1460		
330	Kerosene	46270													S	840	1460		

	A	B	C	D	E	F	G	H	I	J	L	M	N	O	P	Q	R	S
331	Kerosene (used at WH Plant)	48270													S	840	1460	
332	Ro-Neet Packaged:																	
333	Ro-Neet 4x5L	3870									S	889	1420		C	491	6740	
334	Ro-Neet Bulk Used (gal)	3490									C	491	6875		S	875	1420	
335	Ro-Neet 2x2.5	3500									S	874	1420		C	480	6740	
336	Ro-Neet Bulk Used (gal)	3490									C	490	6875		S	876	1420	
337	mt 5L Pails Used	x																
338	mt 2.5 gal Jugs Used	x																
339	Pandamethalin																	
340	4-Nox Used	46250			70,548						C	173	5850	83,123.38	S	834	1480	(83,123.38)
341																		
342																		
343																		
344	Flake Tech Packaged:	Item No	Std	Act	R/M's	F/G's	Cases	Gals/Lbs										
345	Inside Plant:																	
346	Flake Tech 25Kg	3060					260	14,328			S	822	1420	20,540.00	C	165	6740	(20,540.00)
347	Flake Tech Used	3050		1,0003		14,331					C	155	6835	18,773.61	S	804	1420	(18,773.61)
348	Outside Plant:																	
349	Flake Tech 25Kg	3060									S	822	1420		C	155	6740	
350	Flake Tech Used	3050									C	155	6835		S	804	1420	
351	Butox 7800 Produced:	Item No	Std	Act	R/M's	F/G's	Cases	Gals/Lbs										
352	Outside Plant:																	
353	Butoxone DF 7500 Bulk	15590									S	860	1420		C	420	6740	
354	Butoxone DF 7500 10x2.33	15580									S	850	1420		C	420	6740	
355	Butoxone DF 7500 10x2.33 Used	15580									C	420	6870		S	850	1420	
356	Butoxone DF 7500 Bulk Used	15590									C	420	6870		S	820	1420	
357	2.4 D-B Acid	41550	.7650								C	420	5610		S	765	1460	
358	Hi Sil 233	41500	.0050								C	420	5850		S	737	1460	
359	Stepspere DF 200	41600	.0600												S	740	1460	
360	Stepwet DF 95	41610	.0050												S	743	1460	
361	Continental Clay	41620	.1640												S	746	1460	
362	Inside Plant:																	
363	Butoxone DF 7500	15580									S	850	1420		C	420	6740	
364	Butoxone DF 7500 Bulk Used	15590									C	420	6870		S	860	1420	
365	Inside Plant:																	
366	Support	15010									S	869	1420		C	450	6740	
367	Butoxone DF 7500 Bulk Used	15590									C	420	6870		S	860	1420	
368	Butox 175 Packaged:	Item No	Std	Act	R/M's	F/G's	Cases	Gals/Lbs										
369	Butoxone 175 4x1	15260									S	410	1420		C	410	6740	
370	Butox 200 Bulk Used	15200	0.8152								C	410	6850		S	430	1420	
371	2.4, D B Acid	41550	1.8000								C	410	5510		S	765	1460	
372	60% DMA	41580	0.8000								C	410	5700		S	766	1460	
373	Citric Acid	41590	0.2800								C	410	5705		S	767	1460	
374	Jugs	44100									C	410	5870		S	749	1460	
375	Butoxone 175 2x2.5	15240									S	410	1420		C	410	6740	
376	Butox 200 Bulk Used	15200	0.8152								C	410	6850		S	430	1420	
377	2.4, D B Acid	41550	1.8000								C	410	5510		S	765	1460	
378	60% DMA	41580	0.8000								C	410	5700		S	766	1460	
379	Citric Acid	41590	0.2800								C	410	5705		S	767	1460	
380	Jugs	44200									C	410	5870		S	759	1460	
381	Butoxone 175 55	15270									S	410	1420		C	410	6740	
382	Butox 200 Bulk Used	15200	0.8152								C	410	6850		S	430	1420	
383	2.4, D B Acid	41550	1.8000								C	410	5510		S	765	1460	
384	60% DMA	41580	0.8000								C	410	5700		S	766	1460	
385	Citric Acid	41590	0.2800								C	410	5705		S	767	1460	
386	Butox 200 Packaged:	Item No	Std	Act	R/M's	F/G's	Cases	Gals/Lbs										
387	Butoxone 200 4x1	15560									S	430	1420		C	430	6740	
388	Butox 200 Bulk Used	15200	1.0000								C	430	6850		S	824	1420	
389	2.4, D B Acid	41550	2.0800								C	430	5510		S	765	1460	
390	60% DMA	41580	1.1000								C	430	5700		S	766	1460	
391	Citric Acid	41590	0.4200								C	430	5705		S	767	1460	
392	Jugs-1 gal plastic	44100									C	430	5870		S	749	1460	
393	HCC-Cordella Cont'd:																	
394	Butoxone 200 2x2.5	15540									S	430	1420		C	430	6740	
395	Butox 200 Bulk Used	15200	1.0000								C	430	6850		S	824	1420	
396	2.4, D B Acid	41550	2.0800								C	430	5510		S	765	1460	

	A	B	C	D	E	F	G	H	I	J	L	M	N	O	P	Q	R	S
397	60% DMA	41580	1.1000								C	430	5700		S	766	1480	
398	Citric Acid	41590	0.4200								C	430	5705		S	767	1480	
399	Jugs-2.6 gal plastic	44200									C	430	5870		S	759	1480	
400	Butoxone 200 55	15570									S	430	1420		C	430	6740	
401	Butox 200 Bulk Used	15200	1.0000								C	430	6850		S	824	1420	
402	2,4, D B Acid	41550	2.0800								C	430	5510		S	765	1480	
403	60% DMA	41580	1.1000								C	430	5700		S	766	1480	
404	Citric Acid	41590	0.4200								C	430	5705		S	767	1480	
405																		
406	Chemicals Used In Pond																	
407	Dimethylpropionic Acid	45020									C	2151	6400		S	772	1480	
408																		
409	Adjustments to Inventory (Per physical; samples; etc.):																	
410	Product	Item No	Location			Type Adj		Cases/Drums	Gals/Lbs									
411	Propenil Tech	3000	4 Plant			Adj-Inv					S	1054	1440		S	702	1420	
412	Prop Tech	3000	4 Plant			Malted F Tech					C	165	6810		S	702	1420	
413	DCA 650#	3010	4 Plant			Item # change					C	3053	5100		S	701	1420	
414	DCA	3020	97 In Transit			Adj-Inv					C	3053	5100		S	701	1420	
415	DCA	3020	100 EMV-No Hungarian			Adj-Inv					C	3053	5100		S	701	1420	
416	Diuron Std Grade	3030	4 Plant			Adj-Inv					C	3057	5100		S	816	1420	
417	Diuron Std Grade	3030	10 BH			Adj-Inv					C	3057	5100		S	816	1420	
418	Diuron Std Grade	3030	115 Kearney			Adj-Inv To Quantity Shipped to Customer					C	3057	5100		S	816	1420	
419	Diuron B Grade	3040	10 BH			Adj-Inv					C	3057	5100		S	844	1420	
420	Flaked Tech	3050	4 Plant			Adj-Inv					C	3058	5100		S	804	1420	
421	Flake Tech	3050	4 Plant			Malted F Tech					S	804	1420		C	155	6740	
422	Flaked Tech	3050	10 BH			Adj-Inv (Trans out twice in March)					C	3055	5100		S	804	1420	
423	Flaked Tech	3050	78 Odom-Pachuta			Adj-Inv					C	184	6835		B	804	1420	
424	Flake Tech	3050	88 Odom-Waynesboro			Rework Adjustment					C	164	6835		S	804	1420	
425	Flaked Tech 25 Kg	3080	4 Plant			Adj-Inv					C	855	7700		S	822	1420	
426	Flaked Tech 25 Kg	3080	78 Odom-Pachuta			Adj-Inv					C	159	6740		S	822	1420	
427	Flaked Tech 25 Kg	3080	88 Odom-Waynesboro			Adj to Physical					C	3055	5100		S	822	1420	
428	OCPI 550 lb	3140	4 Plant			Adj-Inv					C	3033	5100		S	863	1420	
429	DCA 250kg	3160	4 Plant			Item # change					S	705	1420		C	3053	5100	
430	Wham 2x2.5	3180	10 BH			Adj to Physical					C	3084	5100		S	832	1420	
431	Wham 2x2.5	3180	88 Odom			Adj to Physical					C	164	6740		S	832	1420	
432	3# 66's	3210	4 plant			demo					C	3067	5100		S	806	1420	
433	3# 20 L	3220	25 Plant			Leaker					C	3067	5100		S	819	1420	
434	Wham 30's	3240	10 BH			Adj-Inv					C	164	6740		S	805	1420	
435	Wham 30	3240	10 BH			Samples					C	864	7700		S	805	1420	
436	Wham 30's	3240	78 Odom-Pachuta			Adj-Inv					C	164	6740		S	805	1420	
437	Wham 30	3240	88 Odom-Waynesboro			Rework Adjustment					C	164	6740		S	808	1420	
438	3# Propenil 200L	3250	4 Plant			Label Change					C	3067	5100		S	807	1420	
439	Wham 5	3260	4 Plant			Adj-Inv					C	3084	5100		S	808	1420	
440	Wham 5	3260	10 BH			Adj-Inv					C	164	6740		S	808	1420	
441	Wham 5	3260	88 Odom			Adj-Inv					C	164	6740		S	808	1420	
442	4# 20L	3290	4 Plant			Adj-Inv					C	198	6740		S	812	1420	
443	4# Bulk	3300	4 Plant			Adj-Inv					C	3069	5100		S	817	1420	
444	4# 55's	3310	4 Plant			Label Change					C	3069	5100		S	818	1420	
445	4# 210L	3320	4 Plant			Adj-Inv					C	3069	5100		S	838	1420	
446	4# 200L	3330	4 Plant			Adj-Inv					C	3069	5100		S	839	1420	
447	4# 35's	3340	4 Plant			Adj-Inv					C	3069	5100		S	814	1420	
448	4# 35's	3340	10 BH			Adj-Inv					C	3069	5100		S	814	1420	
449	4# 35	3340	15 American			Adj-Inv					C	3069	5100		S	814	1420	
450	Super Wham 30 g	3350	15 American			Adj-Inv					C	3084	5100		S	831	1420	
451	Super Wham 30 g	3350	78 Odom-Pachuta			Adj-Inv					C	164	6740		S	831	1420	
452	Super Wham 30 g	3350	88 Odom			Adj-Inv					C	3084	5100		S	831	1420	
453	Super Wham 30	3350	88 Odom-Waynesboro			Rework Adjustment					C	164	6740		S	831	1420	
454	Super Wham 2x2.5	3360	10 BH			Adj-Inv					C	3084	5100		S	834	1420	
455	Super Wham 2x2.5	3360	88 Odom-Waynesboro			Adj-Inv					C	164	6740		S	834	1420	
456	Super Wham Bulk	3370	88 Odom			Adj-Inv					C	164	6740		S	858	1420	
457	Duet 30's	3430	10 BH			Adj-Inv					C	159	6740		S	823	1420	
458	Duet 30's	3430	78 Odom-Pachuta			Adj-Inv					C	159	6740		S	823	1420	
459	Duet 30's	3430	88 Odom-Waynesboro			Adj-Inv					C	159	6740		S	823	1420	
460	2,4 D-B Acid 750 Kg	3440	97 In Transit			Wrong item # used					C	440	5100		B	891	1420	
461	Ro-Neet Bulk	3490	128 Fort Storage			Inv Adj			113		C	490	6740	(1,638.50)	S	875	1420	1,638.50
462	Ro-Neet 2x2.5	3500	15 American			Adj-Inv (Sample)		(8)	(40)		C	490	6740	580.00	S	874	1420	(580.00)

	A	B	C	D	E	F	G	H	I	J	L	M	N	O	P	Q	R	S	
463	Ro-Neet 2x2.5	3500	25	Platte		Sample for Dick Freley					C	490	6740		S	874	1420		
464	Ro-Neet 2x2.5	3500	97	In Transit		Adj-Inv					C	490	6740		S	874	1420		
465	Cycloate Technical 200 kg	3520	97	In Transit		Adj-Inv					C	3045	5100		S	879	1420		
466	Sutan 2x2.5	3550	30	AWS		Adj-Inv					C	135	6740		S	877	1420		
467	Sutan 2x2.5	3550	97	In Transit		Adj-Inv					C	135	6740		S	877	1420		
468	Sutan 2x2.5	3550	125	Union Storage		Adj-Inv					C	135	6740		S	877	1420		
469	Eradicane 2x2.5 (USA)	3560	20	Gray		Adj-Inv (Sample)		(2)	(10)		C	3038	5100	159.20	S	883	1420	(159.20)	
470	Eradicane 2x2.5 (USA)	3560	134	Jacobson		Adj-Inv (Sample)		(2)	(10)		C	3038	5100	159.20	S	883	1420	(159.20)	
471	Tilam 2x2.5	3590	15	American W/tra.		Inv Adj		48	240		C	3039	5100	(3,789.60)	S	885	1420	3,789.60	
472	Cycloate Bulk	3640	4	Plant		Inv Adj					C	3045	5100		S	880	1420		
473	Ro-Neet 4x5L	3670	131	Fort Storage		Inv Adj (wrong item # used)					C	491	6740		S	889	1420		
474	Diuron 450 kg	3770	97	In Transit		Adj-Inv					C	3057	5100		S	905	1420		
475	Diuron 450 kg	3770	115	Kerney		From Diuron Bulk					C	3057	5100		S	905	1420		
476	DCPI bulk lbs	40150		Trimac/DSI		Convert DCPI to Kg for Sale					C	3033	5100		S	715	1460		
477	DCPI Bulk Kg	3760		Trimac/DSI		DCPI Sold as kg vs lbs					C	3033	5100		S	907	1420		
478	Propanil 360 210L	10920	4	Plant		Repackage					C	3067	5100		S	828	1420		
479	Support 10x4x 26#	15010	4	Plant		Samples					C	420	5100		S	450	1420		
480	Support 10x4x 26#	15010	10	B/H		Samples					C	420	5100		S	450	1420		
481	Fluometuron Technical	15020	116	Keamey Company		Change from lbs to kgs													
482	2,4 D-B Acid Bulk	15100	97	In Transit		Wrong item # used					C	440	5100		S	898	1420		
483	Butox 175 2x2.5	15240	10	B/H		Inv Adj					C	410	5100		S	410	1420		
484	Butox 175 2x2.5	15240	20	Gray-Albany		Inv Adj					C	410	5100		S	410	1420		
485	Butox 175 2x2.5	15240	30	AWS		Damaged used for sample					C	410	5100		S	410	1420		
486	Butox 175 2x2.5	15240	67	HCC-Cordele		Inv Adj					C	410	5100		S	410	1420		
487	Butox 175 4x1	15260	10	B/H		Inv Adj					C	410	5100		S	410	1420		
488	Butox 175 4x1	15260	11	Cascio		Samples					C	410	7700		S	411	1421		
489	Butox 175 4x1	15260	20	Gray-Albany		Inv Adj					C	410	5100		S	410	1420		
490	Butox 175 4x1	15260	21	Gray-Ashburn		Inv Adj					C	410	5100		S	410	1420		
491	Butox 175 4x1	15260	67	HCC-Cordele		Inv Adj					C	410	5100		S	410	1420		
492	Adjustments to Inventory Cont'd (Per physical; samples; etc.):																		
493	Butox 200 2x2.5	15540	10	B/H		For Samples					C	430	7700		S	850	1420		
494	Butox 200 2x2.5	15540	15	American		Inv Adj					C	430	5100		S	430	1420		
495	Butox 200 2x2.5	15540	20	Gray-Albany		Inv Adj					C	430	5100		S	430	1420		
496	Butox 200 2x2.5	15540	57	HCC-Cordele		Inv Adj					C	430	5100		S	430	1420		
497	Butox 200 4x1	15560	20	Gray-Albany		Inv Adj					C	430	5100		S	430	1420		
498	Butox 7500 DF 10x2.33	15580	10	B/H		Samples					C	420	7700		S	850	1420		
499	Butox 7500 DF 10x2.33	15580	20	Gray-Albany		Inv Adj					C	420	5100		S	850	1420		
500	Butox 7500 DF Bulk	15590	4	Plant		Adj-Inv					C	420	5100		S	850	1420		
501	Ethephon	15740	21	Gray-Ashburn		Set Up Finish Goods					C	187	6740		S	851	1420		
502	Ethephon	15740	78	Odom-Pachuta		Set Up Finish Goods													
503	Tromethemine Bulk	17000	4	Plant		Adj-Inv					C	3683	5100		S	849	1420		
504	Tromethemine Bulk	17000	31	Meritex		Adj-Inv					C	3683	5100		S	849	1420		
505	Tromethemine 25 Kg	17120	4	Plant		Adj-Inv					C	3683	5100		S	843	1420		
506	Tromethemine 25 Kg	17120	31	Meritex		Label Change					C	3683	5100		S	843	1420		
507	Trometamol 50 Kg	17240	4	Plant		Adj-Inv					C	3683	5100		S	847	1420		
508	Tris Ultra Pure 100Kg	17250	4	Plant		Adj-Inv					C	3683	5100		S	853	1420		
509	Pure Tris-Hcl 100Kg	17260	4	Plant		Adj-Inv					C	3683	5100		S	855	1420		
510	Tris Ultra Pure 25Kg	17270	4	Plant		Adj-Inv					C	3683	5100		S	859	1420		
511	Tris Ultra Pure 25Kg	17270	31	Meritex		Label Change					C	983	7700		S	859	1420		
512	Tris Ultra Pure 25Kg	17270	108	Farmis		Inv Adj					C	3677	5100		S	869	1420		
513	Tris Hcl 25Kg	17280	16	ASP BVBA		Inv Adj					C	883	7700		S	859	1420		
514	Tris Hcl Bulk	17280	4	Plant		Adj-Inv					C	3681	5100		S	864	1420		
515	TA Mother Liquor	17300	4	Plant		Adj-Inv													
516	TA Hcl Mother Liquor	17310	4	Plant		Adj-Inv													
517	TA Chunks	17320	4	Plant		Adj-Inv													
518	Ultra Pure Samples	17340	4	Plant		Adj-Inv													
519	Tris UltraPure Bulk (kg)	17350	108	Farmis		Adj to Physical													
520	DCPI	40160	97	In Transit		Adj to Physical					C	157	5635		S	715	1460		
521	Isophorone	40500	78	Pachuta		Adj-Inv					C	151	6400		S	717	1460		
522	Isophorone	40500	86	Waynesboro		Adj-Inv					C	151	8400		S	717	1460		
523	Emulsifier	40600	4	Plant		C6173 Emul blended into tank					C	162	5670		S	718	1460		
524	Emulsifier C6173	40610	4	Plant		Blended into Emul tank					C	162	5670		S	828	1460		
525	Dowfax	40700	88	Odom-Waynesboro		Adj to Physical					C	164	5650		S	753	1460		
526	Arnul Emulsifier	40900	78	Odom-Pachuta		Adj to Physical					C	168	5675		S	720	1460		
527	Arnul Emulsifier	40900	86	Waynesboro		Adj to Physical					C	151	6400		S	720	1460		
528	TM-2 Emulsifier	40910	4	Plant		Adj to Physical					C	151	6400		S	722	1460		

	A	B	C	D	E	F	G	H	I	J	L	M	N	O	P	Q	R	S	
529	Poly Solv	40920	4	Plant		Adj to Physical					C	151	6400		S	723	1480		
530	ODCB	41000	97	In Transit		Adj-Inv					C	153	5520		S	708	1480		
531	Soda Ash	41050	4	Plant		Sold					C	151	6400		S	708	1480		
532	Morwet	41480	88	Odom-Waynesboro		Borrowed from Drexel stock					C	164	5850		S	726	1480		
533	Polyfon O	41470	88	Odom-Waynesboro		Adj to Physical					C	164	5850		S	727	1460		
534	Glycarfina	41480	88	Odom-Waynesboro		Adj to Physical					C	164	5850		S	728	1460		
535	Altonic	41490	88	Odom-Waynesboro		Adj to Physical					C	164	5850		S	728	1460		
536	H5B 233	41500	10	B/H		Adj to Physical					C	164	5850		S	737	1460		
537	H5B 233	41500	78	Odom-Pachuta		Adj to Physical					C	164	5850		S	737	1460		
538	Ketzan	41510	88	Odom-Waynesboro		Adj to Physical					C	164	5850		S	791	1460		
539	Sulfuric Acid	41520	4	Plant		Acfluorfen used this raw material					C	182	5850		S	782	1480		
540	50% Caustic	41530	4	Plant		Entered under wrong item #					C	151	6400		S	783	1460		
541	Formaldehyde	41540	4	Plant		Used out of Vinnings Stock					S	8900	1230		S	784	1460		
542	2,4 D-S Acid	41550	78	Odom-Pachuta		Adj to Physical					C	410	5100		S	765	1480		
543	2,4 D-S Acid	41550	20	Gray Dist. - Albany		Adj to Physical					C	410	5100		S	765	1460		
544	Veegum	41570	88	Odom-Waynesboro		Adj to Physical					C	164	5850		S	731	1460		
545	80% DMA	41580	57	HCC-Cordele		Adj to Physical					C	410	5700		S	768	1480		
546	Citric Acid	41590	57	HCC-Cordele		Adj to Physical					C	164	5850		S	787	1460		
547	Citric Acid	41590	88	Odom-Waynesboro		Adj to Physical					C	164	5850		S	787	1460		
548	Stepesere	41600	88	Odom-Waynesboro		PO written under wrong item #					C	164	5850		S	740	1460		
549	Stapwet	41810	10	B/H		PO written under wrong item #					C	164	5850		S	743	1460		
550	Cont'l Clay	41620	10	B/H		Adj to Physical					C	164	5850		S	746	1460		
551	Morpholine	41630	4	Plant		Adj-Water Treatment					C	151	6400		S	768	1460		
552	Sun 7N Oil	41840	4	Plant		Inv Adj					C	162	5850		S	769	1460		
553	Carbaryl Tech	41870	88	Odom-Waynesboro		Adj to Physical					C	164	5850		S	757	1480		
554	Ethephon	41680	21	Gray-Ashburn		Set Up Finish Good									S	791	1460		
555	Ethephon	41680	78	Odom-Pachuta		Set Up Finish Good					C	187	3910		S	791	1460		
556	Ethephon	41680	88	Odom-Waynesboro		Adj-Inv					C	198	5710		S	791	1460		
557	Soprophor	41690	88	Odom-Waynesboro		Samples					C	184	5850		S	809	1460		
558	Proxol	41730	88	Odom-Waynesboro		Adj-Inv					C	184	5850		S	825	1460		
559	Ucaroide	41750	88	Odom-Waynesboro		Adj-Inv					C	184	5850		S	827	1460		
560	Multrate Tech	41760	88	Odom-Waynesboro		Adj-Inv					C	171	5715		S	828	1460		
561	Drums 30 plastic	42100	4	Plant		Adj to Physical					C	184	5870		S	752	1460		
562	Drums 30 plastic	42100	10	B/H		Adj to Physical					C	184	5870		S	752	1460		
563	Drums 30 plastic	42100	78	Odom-Pachuta		Adj to Physical					C	184	5870		S	752	1460		
564	Drums 30 plastic	42100	88	Odom-Waynesboro		Adj to Physical					C	184	5870		S	752	1460		
565	Adjustments to Inventory Cont'd (Per physical; samples; etc.):																		
566	35 mt's	42210	4	Plant		Adj to Physical					C	1069	5890		S	738	1460		
567	35 mt's	42220	4	Plant		Adj-Inv					C	1069	5890		S	738	1460		
568	35 mt's	42230	4	Plant		Adj-Inv					C	1069	5890		S	738	1460		
569	55 mt black	42300	4	Plant		Adj-Inv					C	1058	5890		S	742	1460		
570	55 mt Crystal	42550	4	Plant		Adj-Inv					S	4	1230		S	766	1460		
571	Methanol	42640	4	Plant		Clean Out Tank					C	188	6400		S	735	1460		
572	Hcl	42670	4	Plant		Adj-Inv					C	151	6400		S	758	1460		
573	Nitromethane	42680	4	Plant		Adj-Inv					C	183	5850		S	787	1460		
574	Raney Nickel	42690	4	Plant		Adj-Inv					C	183	5850		S	788	1460		
575	Sodium Hypo	42610	4	Plant		Sent to Ponds					C	151	6400		S	789	1460		
576	Hydroxamine Sulfate	42650	4	Plant		Adj to Physical					C	151	6400		S	738	1460		
577	Jugs 1	44100	20	Gray-Albany		Adj-Inv					C	410	5870		S	749	1460		
578	Jugs 1	44100	57	HCC-Cordele		Adj-Inv					C	410	5870		S	749	1460		
579	Jugs 2.5	44200	20	Gray-Albany		Adj-Inv					C	410	5870		S	769	1460		
580	Jugs 2.5	44200	57	HCC-Cordele		Shipped per Stanley					C	410	5870		S	759	1460		
581	Jugs 2.5	44200	88	Odom-Waynesboro		Adj to Physical					C	164	5870		S	759	1460		
582	Jugs 2.5	44200	78	Odom-Pachuta		Adj to Physical					C	164	5870		S	769	1460		
583	Antifoam AF 1500	45000	4	Plant		Transfer to Vinning Stock					S	8900	1230		S	770	1460		
584	DMFA	45020	4	Plant		Transfer to Vinning Stock					S	8900	1230		S	772	1460		
585	GMS	45030	4	Plant		Used out of Vinnings Stock					S	8900	1230		S	773	1460		
586	Metacure T-1	45040	4	Plant		Transfer to Cedar Stock					S	8900	1230		S	774	1460		
587	20% Rayon Caustic	45080	4	Plant		Transfer to Cedar Stock					S	8900	1230		S	779	1460		
588	50% Rayon Caustic	45090	4	Plant		Entered under wrong item #					C	151	6400		S	782	1460		
589	Arquar	45100	88	Odom-Waynesboro		Adj to Physical					C	158	5850		S	781	1460		
590	Arquar	45120	88	Odom-Waynesboro		Adj to Physical					C	158	5850		S	783	1460		
591	Irgalite Blue	45130	78	Odom-Pachuta		Adj to Physical					C	3057	5100		S	784	1460		
592											C	4500	4400						
593	DC 1500 Antifoam	45140	88	Odom-Waynesboro		Samples					C	184	5850		S	785	1460		
594	55 mt	45150	88	Odom-Waynesboro		Adj to Physical					C	1058	5890		S	788	1460		

	A	B	C	D	E	F	G	H	I	J	L	M	N	O	P	Q	R	S
585	55 ml	45150	78	Odum-Pachuta	Adj to Physical						C	151	6400		S	788	1450	
586	Butachlor	45200	78	Odum-Pachuta	Adj to Physical						C	151	6400		S	794	1460	
597	Butachlor	45200	88	Odum-Waynesboro	Adj to Physical						C	151	6400		S	794	1460	
598	Cans 5 gal mfs	42000	4	Plant	Adj to Physical						C	161	6400		S	739	1460	
599	Misc Activity:																	
600	Platinum Purchased:																	
601	Platinum	41040	97	In-Transit	Purchased													
602	Platinum	41040	97	In-Transit	Used													
603																		
604	DCPI Purchased:																	
605	DCPI	40150	97	In-Transit	Purchased R-P						S	715	1460		S	2	1590	
606	ODCB	41000	97	In-Transit	Used R-P						S	2	1590		S	703	1460	
607																		
608	Diuron Purchased:																	
609	Diuron	3030	97	In-Transit	Purchased EMV						C	167	5910		S	3	1590	
610	Diuron 450 Kg Bags	3770	113	Kerney	Purchased EMV						S	905	1420		C	157	6740	
611	Diuron	3030	52	Gulf States	Purchased EMV						C	157	5910		S	3	1590	
612	Diuron	3030	97	In-Transit	Transfer to Inventory						S	818	1420		C	157	6740	
613	DCA	3020	97	In-Transit	Used EMV						S	3	1590		S	701	1420	
614																		
615	DCA Purchased:																	
616	DCA	3020	97	In-Transit	Purchased Blesterfeld						C	153	5910		S	4	1590	
617	DCA	3020	97	In-Transit	Purchased Rhone-Poulenc						S	701	1420		C	153	6740	
618	DCA	3020	4	Plant	Transfer to Inventory - Purchased Blesterfeld						S	701	1420		C	153	6740	
619	ODCB	41000	97	In-Transit	Used R-P						C				S	703	1460	
620																		
621	ODCB Purchased	41000	97	In Transit														
622																		
623	Mofinate Tech Purchased	41760	97	In-Transit	Purchased EMV													
624																		
625	Tris Hcl Bulk	17280	4	Plant	Purchased TCPI						S	884	1420		C	181	6740	
626																		
627	Tris Ultrapure Bulk	17350	106	Farmis	Purchased TCPI						S	853	1420		C	181	6740	
628																		
629	2,4 D-B Acid Purchased:																	
630	2,4 D-B Acid	15100	97	In Transit	Purchased AH Maris						S	888	1420		C	440	6740	
631	2,4 D-B Acid	15100	97	In Transit	Sold To Aceto													
632																		
633	Diallylamine Purchased:																	
634	Diallylamine	41210	4	Plant	Purchased H. Celanese													
635	Diallylamine	41210	4	Plant	Sold to N.Hungarian Chem Works													
636																		
637	Fluometuron Tech Purchased:																	
638	Fluometuron (kgs)	15020	52	Gulf States	Purchased N.Hungarian Chem Works						S	870	1420		C	480	6740	
639	Fluometuron (kgs)	15020	115	Kearney Co	Purchased N.Hungarian Chem Works													
640	Fluometuron (kgs)	15020	115	Kearney Co	Sold													
641																		
642	Pendamethalin Purchased:																	
643	Pendamethalin (lbs)	3110	115	Kearney Co	Purch Retail						S	857	1420		C	173	6740	
644																		
645	Cycloate Purchased:																	
646	Cycloate Bulk (lbs)	3640	4	Plant	Purch Zeneca/Syngenta						S	880	1420		C	491	6740	
647	Cycloate Bulk (lbs)	3640	25	Platte Chem	Purch Zeneca/Syngenta						S	880	1420		C	491	6740	
648	Cycloate Bulk (lbs)	3640	97	In Transit	Purch N.Hungarian Chem Works?						S	880	1420		C	491	6740	
649																		
650	Ro-Neet Purchased:																	
651	Ro-Neet 2x2.5	3500	10	Blackhawk	Purch Zeneca/Syngenta						S	874	1420		C	490	6740	
652	Ro-Neet 2x2.5	3500	15	American W	Purch Zeneca/Syngenta					(432)	S	874	1420	(6,264.00)	C	490	6740	6,264.00
653	Ro-Neet 2x2.5	3500	105	Inland Empr	Purch Zeneca/Syngenta						S	874	1420		C	490	6740	
654	Ro-Neet 2x2.5	3500	124	Wright Dist.	Purch Zeneca/Syngenta						S	874	1420		C	490	6740	
655	Ro-Neet 2x2.5	3500	125	Union Transf	Purch Zeneca/Syngenta						S	874	1420		C	490	6740	
656	Ro-Neet 2x2.5	3500	97	In Transit	Purch Zeneca/Syngenta						S	874	1420		C	490	6740	
657																		
658	Ro-Neet 20L	3450	97	In Transit	Purch Zeneca/Syngenta						S	883	1420		C	491	6740	
659																		
660	Ro-Neet Bulk Lbs	3480	97	In Transit	Purch Zeneca/Syngenta						S	887	1420		C	490	6740	

	A	B	C	D	E	F	G	H	I	J	L	M	N	O	P	Q	R	S	
681																			
682	Ro-Neet Bulk Gals	3480	25	Platta Chem	Purch Zeneca/Syngenta						S	875	1420		C	480	6740		
683	Ro-Neet Bulk Gals	3490	128	West Central	Purch Zeneca/Syngenta						S	875	1420		C	480	6740		
684																			
685	Ro-Neet 4x5L	3670	131	Fort Storage	Purch Zeneca/Syngenta						S	889	1420		C	491	6740		
686	Ro-Neet 4x5L	3870	97	In Transit	Purch Zeneca/Syngenta				690		S	889	1420	3,174.00	C	491	6740	(3,174.00)	
687																			
688	Sutan Purchased:																		
689	Sutan 2x2.5	3550	30	AWS	Purch Zeneca/Syngenta				(360)		S	877	1420	(8,433.20)	C	135	6740	8,433.20	
670	Sutan 2x2.5	3550	78	Odom-Pach	Purch Zeneca/Syngenta						S	877	1420		C	135	6740		
671	Sutan 2x2.5	3550	97	In Transit	Purch Zeneca/Syngenta						S	877	1420		C	135	6740		
672																			
673	Eradicane Purchased:																		
674	Eradicane 2x2.5	3560	15	American W	Purch Zeneca/Syngenta						S	883	1420		C	136	6740		
675	Eradicane 2x2.5	3560	20	Gray-Albany	Purch Zeneca/Syngenta						S	883	1420		C	136	6740		
676	Eradicane 2x2.5	3560	80	Frontier Str	Purch Zeneca/Syngenta				(360)		S	883	1420	(5,731.20)	C	136	6740	5,731.20	
677	Eradicane 2x2.5	3560	97	In Transit (N	Purch Zeneca/Syngenta						S	883	1420		C	136	6740		
678	Eradicane 2x2.5	3560	105	Inland	Purch Zeneca/Syngenta						S	883	1420		C	136	6740		
679	Eradicane 2x2.5	3560	125	Union Stora	Purch Zeneca/Syngenta						S	883	1420		C	136	6740		
680	Eradicane 2x2.5	3560	134	Jacobson	Purch Zeneca/Syngenta						S	883	1420		C	136	6740		
681																			
682	Eradicane 2x10L	3720	97	In Transit	Purch Zeneca/Syngenta						S	899	1420		C	137	6740		
683	Eradicane 2x10L	3720	131	Fort Storage	Purch Zeneca/Syngenta						S	899	1420		C	137	6740		
684	Eradicane 2x10L	3720	132	TF Warehouse	Purch Zeneca/Syngenta						S	899	1420		C	137	6740		
685	Eradicane 2x10L	3720	133	Erio Robins	Purch Zeneca/Syngenta						S	899	1420		C	137	6740		
686																			
687	Eradicane 6E Bulk (liters)	3730	97	In Transit	Purch Zeneca/Syngenta						S	901	1420		C	137	6740		
688																			
689	Eradicane 6.7E 20 LT	3780	97	In Transit	Purch Zeneca/Syngenta						S	912	1420		C	137	6740		
690	Eradicane 6.7E 200 LT	3800	97	In Transit	Purch Zeneca/Syngenta						S	913	1420		C	137	6740		
691																			
692	Misc Activity (cont'd):																		
693	Tilam Purchased:																		
694	Tilam 2x2.5	3590	4	Plant	Purch Zeneca/Syngenta		Not on A9408				S	885	1420		C	139	6740		
695	Tilam 2x2.5	3590	15	American W	Purch Zeneca/Syngenta				960		S	885	1420	15,158.40	C	139	6740	(15,158.40)	
696	Tilam 2x2.5	3590	30	AWS	Purch Zeneca/Syngenta				(960)		S	885	1420	(15,158.40)	C	139	6740	15,158.40	
697	Tilam 2x2.5	3590	97	In Transit	Purch Zeneca/Syngenta						S	885	1420		C	139	6740		
698	Tilam 2x2.5	3590	127	Robertson J	Purch Zeneca/Syngenta						S	885	1420		C	139	6740		
699																			
700	Tilam 200L	3650	97	In Transit	Purch Zeneca/Syngenta						S	892	1420		C	139	6740		
701																			
702	Tilam Tech (gal)	3700	4	Plant	Purch Zeneca/Syngenta						S	900	1420		C	139	6740		
703																			
704	Pebulate Tech Purchased:																		
705	Pebulate Tech (lbs)	41790	4	Plant	Purch Zeneca/Syngenta														
706																			
707	EPTC Purchased:																		
708	EPTC 200kg	3480	97	In Transit	Purch EMV						S	902	1420		C	174	6740		
709																			
710	Eptam Purchased:																		
711	Eptam (lb)	3580	97	In Transit	Purch EMV						S	884	1420		C	138	6740		
712	Eptam (lb)	3580	97	In Transit	Purch Zeneca						S	884	1420		C	138	6740		
713	Dichloromid Tech Purchased:																		
714	Dichloromid Tech	3780	100	EMV	Purch EMV						S	906	1420		C	480	6740		
715	Good Buffers Purchased:																		
716	Hesper Bulk kg	17470	97	In Transit							S	908	1420		C	196	6740		
717	Mee Bulk kg	17480	100	EMV							S	908	1420		C	196	6740		
718																			
719	Repose																		
720	Repose	3630	30	AWS	Purch Zeneca/Syngenta				(262)		S	678	1420	(4,548.08)	C	140	6740	4,548.08	
721																			
722	CEDAR - WEST HELENA																		
723	Production & Sales Units																		
724		11/30/2001																	
725		Item	PRODUCE	Prod	SOLD	Prod	Year-To-Date												
726		No	Drums	lbs/gls	No	Drums	lbs/gls	No	Contracts										
726	Acifluorfen 100% kg	5120		41,068	86		41,068	583	818,856										

	A	B	C	D	E	F	G	H	I	J	L	M	N	O	P	Q	R	S
727	ATP Telene	6250			74			578	3,734,120									
728	Orcanilide	6170			78			575	229,840									
729	TA	17000		72,081	87				959,713		C	3883	5100	282,288.75	S	837	1420	
730	Pure Tromethamine 25Kg	17120				885	24,826								S	843	1420	(237,138.75)
731	Pure Tromethamine 50#	17130				210	4,763								S	873	1420	(45,150.00)
732	Pure Tromethamine 50Kg	17230													S	846	1420	
733	TA Total						26,785	588										
734	Tham 25 Kg	17020									C	3681	5100		S	842	1420	
735	Trometamol 25 Kg	17220													S	845	1420	
736	Trometamol 50 Kg	17240													S	847	1420	
737	Tris Ultra Pure 100 Kg	17250													S	853	1420	
738	Pure Tris Hcl 100 Kg	17260																
739	Tham Total							581										
740	Tris Ultra Pure 25Kg	17270				74	1,850				C	3877	5100	25,900.00	S	859	1420	(25,900.00)
741	Tris Ultra Pure Bulk (kg)	17350																
742	UP Total						1,850	577										
743	Tris Hcl 25Kg	17280	152	3,800		4	100				C	3878	5100	1,483.00	S	859	1420	(1,483.00)
744	Tris Hcl Bulk	17280																
745	Ultra Pure Samples Bulk	17340																
746	TA-HCL Total						100	579										
747	2AS kg	17380		9,035	89			584										
748	Hepes bulk kg	17470									C	3698	5100		S	908	1420	
749	Hepes NA kg	17480																
750	Mes bulk kg	17490													S	909	1420	
751	Good Buffers Total							696										
752	P Tech	3000		1,037,770	20			554			C	3054	5100		S	702	1420	
753	DCA 550 lb	3010									C	3053	5100		S	703	1420	
754	DCA 250 kg	3160									C	3053	5100		S	705	1420	
755	DCA	3020		892,978	10										S	701	1420	
756	DCA Total							653										
757	Diuron	3030		20,000							C	3057	5100		S	818	1420	
758	Diuron B Grade	3040													S	844	1420	
759	Diuron 450 kg	3770													S	805	1420	
760	Total Diuron			20,000	11			557										
761	DCPI Bulk lbs	40150		52,929	12													
762	DCPI Bulk kg	3760													S	807	1420	
763	DCPI 550#	3140									C	3033	5100		S	885	1420	
764								560										
765	Flake Tech 25 Kg	3060	260	14,326		760	41,876				C	3055	5100	172,045.00	S	822	1420	(80,040.00)
766	Flaked Tech	3050		538,500	21		85,500		S/S						S	804	1420	(112,005.00)
767	Total Flake Tech			552,826			127,376	555										
768	3# 210L	10020									C	3087	5100		S	826	1420	
769	3# bulk	3200													S	802	1420	
770	3# 50 L	3190			23										S	854	1420	
771	3# 20L	3220													S	819	1420	
772	3# 200L	3250													S	807	1420	
773	3# 55	3210													S	808	1420	
774	3# Total							567										
776	Wham 2.2.5	3180									C	3084	5100		S	832	1420	
778	Wham 5	3260													S	808	1420	
777	Wham 2x10L	3380													S	881	1420	
778	Wham 100L	3230													S	828	1420	
779	Wham 30	3240													S	805	1420	
780	Super Wham Bulk	3370													S	858	1420	
781	Super Wham 2x2.5	3360													S	834	1420	
782	Super Wham 30	3350													S	831	1420	
783	Wham Sub-Total				26			564										
784	Duet 30	3430									C	3059	5100		S	823	1420	
785	Duet 2x10L	3390													S	886	1420	
786	Duet Total				69			569										
787	RiceSolo Bulk	3130			27													
788	RiceSolo 30	3080									C	3088	5100		S	882	1420	
789	RiceSolo Total							568										
790	Dichlorimid Tech Kg	3780						547			C	480	5100		S	906	1420	
791	Mofinate 72	3100			22			558			C	3697	5100		S	886	1420	
792	RiceCue 500#	3090			55			571			C	3071	5100		S	887	1420	

	A	B	C	D	E	F	G	H	I	J	L	M	N	O	P	Q	R	S
783	RiceCue 1500#	3270									C	3071	5100		S	868	1420	
784	Total RiceCue																	
795	Stam bulk	3400		114,557	32										S	811	1420	
786	Stam 35	3420	2,575	80,125		2,575	80,125				C	3072	5100	776,877.50	S	813	1420	(776,877.50)
787	Stam Total			204,682			80,125	572										
798	4# bulk	3300			24						C	3069	5100		S	817	1420	
799	4# 20 L	3290													S	812	1420	
800	4# 55	3310													S	818	1420	
801	4# 210 L	3320													S	836	1420	
802	4# 200 L	3330													S	838	1420	
803	4# 35	3340													S	814	1420	
804	Prop 4# Domestic Sales							569										
805	Butoxone 175 4x1	15260									C	410	5100		S	410	1420	
806	Butoxone 175 2x2.5	15240																
807	175 Total				51			591										
808	Butoxone 200 2x2.5	15540				36	180				C	430	5100	2,307.60	S	430	1420	(2,307.60)
809	Butoxone 200 4x1	15560																
810	200 Total				52		180	594										
811	Ethephon 100% AI	15740			90			595			C	3887	5100		S	851	1420	
812	Butox 7500 10x2.33	16580						592			C	420	5100		S	850	1420	
813	Butox 7500 Bulk	16590			53													
814	2,4 D-B Acid 750 kg	3440						593			C	440	5100		S	891	1420	
815	Ro-Neet Bulk	3480			95		1,017				C	490	5100	14,748.50	S	875	1420	(14,748.50)
816	Ro-Neet USA 2x2.5	3500				144	720				C	490	5100	10,440.00	S	874	1420	(10,440.00)
817							1,737	548										
818	Ro-Neet 4x1	3670									C	491	5100		S	889	1420	
819	Ro-Neet 20Lt	3450									C	491	5100		S	893	1420	
820					80			548										
821	Cycloate 200 Kg (Ro-Neet ROW)	3520			30			540			C	491	5100		S	879	1420	
822	Support	15010						667			C	450	5100		S	869	1420	
823	Butan 2x2.5	3550			62	(36)	(180)	530			C	3035	5100	(3,218.60)	S	877	1420	3,218.60
824	Eradicane-USA 2x2.5	3560			63			531			C	3038	5100		S	883	1420	
825	Eradicane 8E 2x10L	3720									C	3037	5100		S	899	1420	
826	Eradicane 8.7E 20LT	3780									C	3037	5100		S	912	1420	
827	Eradicane 8.7E 200LT	3800									C	3037	5100		S	913	1420	
828	Eradicane 8E Bulk Ltr	3730			64						C	3037	5100		S	901	1420	
829								532										
830	Tilam 2x2.5	3580			68			534			C	3039	5100		S	885	1420	
831	Tilam 200 ltr	3650			69			538							S	892	1420	
832	Eptam bulk ltr	3580						533			C	3038	5100		S	884	1420	
833	Arrosato Bulk	3170			43						C	3032	5100		S	894	1420	
834	Arrosato 30's	3410									C	3032	5100		S	895	1420	
835								570										
836	Eptam				65			533										
837	EPTC 200 Kg	3460			29			573			C	3074	5100		S	902	1420	
838	Repose 2x2.5	3630									C	3040	5100		S	878	1420	
839	Repose Bulk	3820		1,515			1,515				C	3040	5100	28,573.10	S	815	1420	(28,573.10)
840	Repose T 2x2.5	3690									C	3040	5100		S	896	1420	
841				1,515	40		1,515	582										
842	Pendamethalin	3110			28		68,138	568			C	3073	5100	214,948.50	S	857	1420	(214,948.50)
843	Shroud 2x2.5	3680			44			537			C	3042	5100		S	897	1420	
844	Floumeturon Bulk kg	15020						545			C	460	5100		S	870	1420	
845																		
848	KWH						1,171,085	101										
847	Total													1,524,373.35				(1,524,373.35)
848																		
849																		
850																		
851																		
852																		
853																		
854																		
855																		
856																		
857																		
858																		

	A	B	C	D	E	F	G	H	I	J	L	M	N	O	P	Q	R	S
859																		
860																		
861																		
862																		
863																		
864																		
865																		
866	Finish Goods Standards:																	
867	Product	Item No	Unit	Per Unit														
868	Propanil Tech Bulk	3000	lbs	1.27														
869	DCA 650 lb	3010	lbs	1.53														
870	DCA-Cedar	3020	lbs	1.48														
871	Diuron	3030	lbs	2.24														
872	Diuron B Grade	3040	lbs	2.24														
873	Fialked Tech	3050	lbs	1.31														
874	Fialked Tech 25Kg	3060	kg	3.16														
875	Diuron Col 224 Kg	3070	kg															
876	RtceSolo 30 Gal	3080	gls	6.41														
877	RiceCue 500 lbs	3090	lbs	.74														
878	Molinate 72 (6#)	3100	lbs	4.95														
879	Pendamethalin	3110	lbs	3.25														
880	EPTC 7C	3120	gls	13.60														
881	RiceSolo Bulk	3130	gls	6.41														
882	DCPH 650 lbs	3140	lbs	2.65														
883	Molinate 72 Bulk	3150	gls	4.95														
884	DCA 250 Kg	3160	kg	3.26														
885	Arrosolo	3170	gls	6.41														
886	WhamI EZ 2x2.5 Gal	3180	gls	9.03														
887	3# 50 Liter	3190	Lt	2.67														
888	Propanil 3# bulk	3200	gls	7.93														
889	Propanil 3# 55 gal	3210	gls	10.08														
890	Propanil 3# 20L	3220	Lt	2.67														
891	Wham 100 Liter	3230	Lt	2.32														
892	Wham 30 gal	3240	gls	9.03														
893	Propanil 3# 200L	3250	Lt	2.67														
894	Wham 5 gal	3260	gls	9.03														
895	RiceCue 1500 lbs	3270	lbs	.74														
896	2,4 d-b Acid 25 kg	3280	kg	6.39														
897	Propanil 4# 20L	3290	Lt	2.67														
898	Propanil 4# Bulk	3300	gls	7.93														
899	Propanil 4# 55 gal	3310	gls	10.08														
900	Propanil 4# 210 L	3320	Lt	2.67														
901	Propanil 4# 200L	3330	Lt	2.67														
902	Propanil 4# 35 gal	3340	gls	10.08														
903	Super WhamI 30 gal	3350	gls	9.03														
904	Super WhamI 2x2.5 Gal	3360	gls	9.03														
905	Super Wham Bulk	3370	gls	9.03														
906	Wham Ez 2x10L	3380	lt	2.32														
907	Duet 2x10L	3390	lt	2.26														
908	Stam Bulk	3400	gls	7.88														
909	Arrosolo 30 Gal	3410	gls	7.01														
910	Stam 35 gal	3420	gls	8.62														
911	Duet 30 gal	3430	gls	8.54														
912	2,4 D-B Acid 750 kg	3440	kg	6.39														
913	Ro-Neet 20L	3450	kg	4.60														
914	EPTC 200 Kg	3460	kg	2.68														
915	EPTC Tech Bulk	3470	lbs	1.08														
916	Ro-Neet Tech	3480	lbs	1.49														
917	Ro-Neet Bulk	3490	gls	14.60														
918	Ro-Neet 2x2.5	3500	gls	14.50														
919	Cycloate Tech 200 Kg	3520	kg	3.90														
920		3530		1.77														
921	Alachlor	3540	kg	3.90														
922	Sutan 2x2.5	3550	gls	17.87														
923	Eradicane - USA 2x2.5	3560	gls	15.82														
924	Eradicane -ROW 2x2.5	3570	gls	10.82														

	A	B	C	D	E	F	G	H	I	J	L	M	N	O	P	Q	R	S
925	Eptam	3580	lt	2.80														
926	Tillam 2x2.5	3590	gts	15.79														
927		3600		9.00														
928		3610		30.00														
929	Eradicane 8E Bulk	3620	ltr	2.89														
930	Repose 2x2.5	3630	gts	18.04														
931	Cycloate Bulk	3640	lbs	1.49														
932	Tillam 200L	3650	lt	3.50														
933	RoNeel Tech Bulk Ltrs	3660	ltre	3.90														
934	Roneet 4x5lt	3670	ltr	4.60														
935	Shroud 2x2.5 gal	3680	gts	11.36														
936	Repose T 2x2.5 gals	3690	gts	18.04														
937	Tillam Tech	3700	gts	12.47														
938	Eradicane 6.7E Bulk gts	3710	gts	15.92														
939	Eradicane 8E 2x10Ltr	3720	ltr	3.00														
940	Eradicane 8E Bulk	3730	ltr	3.00														
941	EPTC Tech Bulk	3740	kg	2.66														
942	DCPI Bulk Lbs	3750	lbs	2.61														
943	DCPI Bulk Kg	3760	kg	5.38														
944	Dituron 450 Kg	3770	kg	4.94														
945	Dichlorid Tech bulk kg	3780	kg	9.50														
946	Eradicane 6.7E 20 ltr	3780	ltr	3.28														
947	Eradicane 6.7E 200ltr	3800	ltr	3.28														
948	Eradicane 6.7E Bulkltr	3810	ltr	3.28														
949	Repose Bulk Gals	3820	gts	17.54														
950	Tham	5340	lbs	4.30														
951	Finish Goods Standards (cont'd):																	
952	Propanil 360 210 L	10020	Li	2.67														
953	Support	15010	lbs	13.71														
954	Fluometron Tech	15020	kg	9.08														
955	2,4 d-b Acid	15100	lbs	2.80														
956	Butox 200 Bulk	15200	gts	10.25														
957	Butox 175 (15240/15260/15270	15240	gts	11.22														
958	Butox 200 (15230/40/60/70)	15570	gts	12.82	10.03													
959	Butoxone 7500 DF	15580	Bag	13.71														
960	Butoxone 7500 DF	15590	Bulk	4.94														
961	Elhephon	15740	lbs	1.24														
962	Tromethamine Bulk	17000	lbs	4.30														
963	Tham 25 Kg	17020	kg	9.63	4.37	lb												
964	Pure Tromethamine 25 Kg	17120	kg	9.63	4.37	lb												
965	Tromethamine 50#	17130	lbs	4.30														
966	Trometamol 25 kg	17220	kg	9.63	4.37	lb												
967	Pure Tromethamine 50 Kg	17230	kg	9.63	4.37	lb												
968	Tromethamol 50 Kg	17240	kg	9.63	4.37	lb												
969	Tris Ultra Pure 100 Kg	17250	kg	9.63	4.37	lb												
970	Pure Tris-Hcl 100 Kg	17260	kg	9.63	4.37	lb												
971	Tris Ultra Pure 25 Kg	17270	kg	14.00	6.35	lb												
972	Tris Hydrochloride 25 kg	17280	kg	14.63	6.64	lb												
973	Tris Hcl Bulk	17280	lbs	6.57	2.98	lb												
974	Tris UltraPure Bulk	17350	lbs	14.63	6.64	lb												
975	2AB bulk kg	17380	kg	13.51	6.13	lb												
976	Hepes 25kg	17410	kg	31.50	14.29	lb												
977	Hepes NA 25kg	17420	kg	35.00	15.88	lb												
978	Mes 25kg	17430	kg	30.00	13.61	lb												
979	Mes NA 25kg	17440	kg	35.00	15.88	lb												
980	Pipes 25kg	17450	kg	30.00	13.61	lb												
981	Pipes NA 25kg	17460	kg	35.00	15.88	lb												
982	Hepes Bulk	17470	kg	31.50	14.29	lb												
983	Hepes NA Bulk	17480	kg	35.00	15.88	lb												
984	MES Bulk	17490	kg	30.00	13.61	lb												
985	MES NA Bulk	17500	kg	35.00	15.88	lb												
986	Pipes Bulk	17510	kg	30.00	13.61	lb												
987	Pipes Esquisodium Bulk	17520	kg	35.00	15.88	lb												
988																		
989	R/M's Standard:																	
990	Product	Item No	Unit	Per Unit														

	A	B	C	D	E	F	G	H	I	J	L	M	N	O	P	Q	R	S
991	DCA	40100	lbs	1.05														
992	DCPI	40150	lbs	2.61														
993	P Acid	40200	lbs	.29														
994	P Anhydr	40300	lbs	.92														
995	MO	40400	lbs	.59														
996	Isophor	40500	lbs	.56														
997	Emul	40600	lbs	.70														
998	Emul C8173	40810	lbs	.70														
999	Dowfax 3B2	40700	lbs	7.52														
1000	Aromatic B	40800	lbs	.23														
1001	Amul	40900	lbs	.76														
1002	TM-2 Emulsifier	40910	lbs	1.65														
1003	PolySolv	40920	lbs	.71														
1004	MCPA-IOE	40930	lbs	1.78														
1005	QDCB	41000	lbs	.32														
1006	Sulfuric Acid	41010	lbs	.04														
1007	Nitric Acid	41020	lbs	.16														
1008	Hydrogen	41030	lbs	1.20														
1009	Platinum	41040	tr ozs	500.00														
1010	Soda Ash	41050	lbs	.13														
1011	Lima	41060	lbs	.07														
1012	Plat Cat	41070	lbs	86.00														
1013	Isoph/Mibk	41080	lbs	.52														
1014	Hydrogen Peroxide	41090	lbs	.23														
1015	Xylene (Cedar)	41200	lbs	.24	Jan-01													
1016	Dialymine	41210	lbs	4.79														
1017	Formic Acid	41220	lbs	.50														
1018	Mibk	41300	lbs	.47														
1018	Vengel	41450	lbs	1.37														
1020	Morewet	41460	lbs	1.08														
1021	Polyton	41470	lbs	.62														
1022	Glycer	41480	lbs	.62														
1023	Alfonio	41490	lbs	.78														
1024	Hi Sil	41500	lbs	.83														
1025	Kelzan	41510	lbs	5.52	Jan-01													
1026	Sulfuric Acid 93%	41520	lbs	.04														
1027	Caustic 50%	41530	lbs	.06														
1028	Formaldehyde	41540	lbs	.12														
1029	2,4 D-B Acid	41550	lbs	2.00														
1030	Carbon Bisulfide	41560	lbs	.28														
1031	Veegum	41570	lbs	1.97	Jan-01													
1032	60% DMA	41580	lbs	.44														
1033	Citric Acid	41590	lbs	.92														
1034	Step-sperse DF 200	41600	lbs	1.27														
1035	Stepwet DF 95	41610	lbs	2.48														
1036	Continental Clay	41620	lbs	.06														
1037	R/M's Standard (cont'd):																	
1038	Morpholine	41630	lbs	1.06														
1039	Sun 7N Oil	41640	lbs	.22														
1040	Anhydrous DMA	41650	lbs	.64														
1041	High Purity Heptane	41660	lbs	.21														
1042	Technical Carbyl	41670	lbs	3.75														
1043	Ethephon	41680	lbs	3.37														
1044	Sorprophor 4d384	41690	lbs	1.87														
1045	Mixed Nitrating Acid	41700	lbs	.11														
1046	Acetic Anhydride	41710	lbs	.38														
1047	Ethylene Dichloride	41720	lbs	.22														
1048	Proxel GXL	41730	lbs	5.12														
1049	Perkone D	41740	lbs	.33														
1050	Ucarcide	41750	lbs	2.50														
1051	Molinata	41760	lbs	2.80														
1052	Kazin Clay 16 40	41770	lbs															
1053	Sponto 221 ER	41780	lbs	1.07														
1054	Pebulate Tech	41790	lbs	1.88														
1055	5 gal/20 L Pts	42000	ea	3.95														
1056	30 lbs	42100	ea	16.85														

	A	B	C	D	E	F	G	H	I	J	L	M	N	O	P	Q	R	S
1057	Stam 35	42200	ea	17.90														
1058	35 ml's	42210	ea	19.50														
1059	35 ml's Plastic/Stam	42220	ea	15.00														
1060	35 ml's Plastic/Prop	42230	ea	19.00														
1061	55 ml's	42300	ea	22.05														
1062	55 ml's Plastic	42500	ea	22.50														
1063	55 ml's-TA	42510	ea	22.05														
1064	55 ml's Crystal Litho	42550	ea	21.60														
1065	MTPO Drums	42600	ea	25.55														
1066	Sodium Hypo	42610	lbs	.06														
1067	Caustic 30%	42620	lbs	.07														
1068	Methyl Mercaptan	42630	lbs	.78														
1069	Methanol 99%	42640	lbs	.12														
1070	Hydroxylamine Sulfate	42650	lbs	1.00														
1071	Caustic 17%	42660	lbs	.03														
1072	Hydrochloric Acid	42670	lbs	.05														
1073	Nitromethane 99.5%	42680	lbs	1.38														
1074	Nickel Catalyst	42690	lbs	7.83														
1075	DMA 40% Solution	42700	lbs	.47														
1076	R/M's Standard:																	
1077	Product	Item No	Unit	Per Unit														
1078	Unipacks	44000	ea	2.88														
1078	Jugs-1 Gal Plastic	44100	ea	.43														
1080	Jugs-2.5 Gal Plastic	44200	ea	1.36														
1081	Antifoam AF 8000	45000	lbs	9.60														
1082	Acetone	45010	lbs	.35														
1083	Dimethylpropionic	45020	lbs	2.83														
1084	Glycerol Monostearate	45030	lbs	.71														
1085	Metaure T-1 Catalyst	45040	lbs	12.26														
1086	Methylethanolamine	45050	lbs	2.15														
1087	Proxel GXL Blocker	45060	lbs	6.20														
1088	Toluene Disocyanate	45070	lbs	1.33														
1089	20% Rayon Grade Caustic	45080	lbs	.11														
1090	50% Caustic	45090	lbs	.08 (Old Rayon Grade)														
1091	Arquad 18/29	45100	lbs	1.15														
1092	Arquar 2C75	45120	lbs	1.85														
1093	Irgalite Blue dye	45130	lbs	13.55														
1094	DC 1500 Antifoam	45140	lbs	6.30														
1095	Drum 55 gal Daron Col	45150	ea	44.95														
1096	Butachlor	45200	lbs	2.35														
1097	Sodium Cyanide	45300	lbs	.90														
1098	TEAB	45310	lbs	3.90														
1099	Tenneco 500/100	45320	lbs	.18														
1100	36% Hcl	45330	lbs	.10														
1101	Toluene	45340	lbs	.15														
1102	Rock Salt	45350	lbs	.18														
1103	Thionyl Chloride	45360	lbs	.70														
1104	DMF	45370	lbs	.95														
1105	Granular Salt	45380	lbs	.12														
1106	55 ml Drums (Cyper)	45390	lbs	29.50														
1107	2-4 DB Acid 95%	46000	kg	2.55														
1108	Metasulfuron Methyl 90%	46010	kg	116.50														
1109	Acido Propionico Puro	46020	kg	1.27														
1110	R/M's Standard (cont'd):																	
1111	Acido Propionico Usado	46030	kg	1.27														
1112	Diclorocetina 98%	46040	kg	3.00														
1113	Propanil Tech	46050	kg	3.08														
1114	Criston 34	46060	kg	2.28														
1115	Criston 180	46070	kg	2.48														
1116	Acete Banana	46080	kg	.11														
1117	Oxido Mestilico	46090	kg	2.08														
1118	Tolueno	46100	kg	.79														
1119	Quinlorac 85%	46110	kg	66.28														
1120	Dichloramin Tech 87%	46120	kg	9.50														
1121	EPTC Tech	46130	kg	2.84														
1122	Anhydrous Hydr Chloride	46200	lbs	.70														

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S
1123	Ethylene Oxide	48210	lbs	.42															
1124	Phosphorus Trichloride	48220	lbs	.42															
1125	Butylate Tech	48230	res	1.93															
1126	Formic Acid	48240	lbs	.50															
1127	4-Nox	48250	lbs	1.32															
1128	AU-588	48260	lbs	1.10															
1128	Kerosene	48270	lbs	.25															
1130	Monochloro Toulene	48280	lbs	.41															
1131	Aromatic 200	48290	lbs	.27															
1132	AU 567 Emulsifier	48300	lbs	1.15															
1133	AU 545 Emulsifier	48310	lbs	1.15															
1134	Hepes NA Solution	48320	kg	31.40															
1135	1-NP	48330	lbs	2.00															
1136	TEA	48340	lbs	1.26															

Leo

70.71

Exp.

Décines, le 7 Janvier 2002

FROM	: D. STEPHAN	TO		
TÉL.	: 04 72. 93 52 56.	C.	Mc GEE	CEDAR
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<p style="text-align: center;">CYCLANILIDE</p> <p style="text-align: center;">RE-COMMISSIONING REPORT</p>

Please, find enclosed the report ref. RP/IND/DAP/333/2002/0002/DS – December 19, 2001 about the re-commissioning for the cyclanilide process.

During the last debriefing meeting held with CEDAR headquarters executives, all the people agreed that an 85%-cyclanilide chemical yield was reachable, based on the results obtained during this re-commissioning period. Available analysis we have got in hand at this date, showed unambiguously that the product such proceeded matched the *Active Ingredient* specifications.

CEDAR's plant manager indicated the expected cycle time for its unit: 14 hours, which should allow to reach 1.5 T/day of technical cyclanilide.

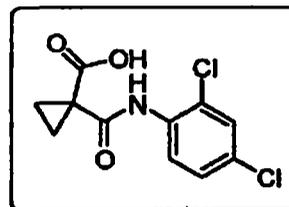
Best regards



Dominique STEPHAN

CYCLANILIDE (RPA 90946)

MINUTES FOR THE RE-COMMISSIONING OF CYCLANILIDE



**CYCLANILIDE PROCESS RE-COMMISSIONING
IN CEDAR WEST-HELENA' FACILITIES, ARKANSAS, USA.**

19th December, 2001

Authors:

Dominique STEPHAN, Olivier PARDIGON, Gérard BERROD and Bernard HERNO

Ref. RP/TND/DAP/333/2002/0002/DS

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CYCLANILIDE RPA90946	N° : 1.0	Rev. :1.0
CYCLANILIDE PROCESS COMMISSIONING	Clasf. : RP/IND/DAP/333/2002/0002/DS	
in CEDAR West-Helena' facilities. Arkansas, USA	Sender. : STEPHAN D., PARDIGON D., BERROD G., HERNO B.	
	Date : 19/12/2001	Page : 2/69

Table of contents

1.1	COMPOUNDS AND REAGENTS.....	5
4.2.	SELECTIVITY PARAMETERS.....	5
4.3.1.	<i>Conversion of DCA reagent</i>	5
4.3.2.	<i>Yield in main product cyclanilide</i>	6
4.3.3.	<i>Yield in side-product bis-amide</i>	6
4.3.4.	<i>Selectivity in main product cyclanilide towards DCA</i>	6
2	INTRODUCTION.....	7
2.1	MISCELLANEOUS INFORMATION ABOUT THE SITE AND THE PLANT.....	7
2.2	CYCLANILIDE PROCESS.....	8
2.2.1	<i>Chemical equations</i>	9
2.2.2	<i>Block diagrams</i>	12
2.2.3	<i>Global performances / expectations</i>	15
3	COMMENTS FOR THE PRODUCTION OF THE FIRST BATCHES.....	16
3.1	COUPLING REACTION.....	16
3.1.1	<i>Short description of the required apparatus</i>	16
3.1.2	<i>Cycle time</i>	16
3.1.3	<i>Standard operating procedure</i>	16
3.1.4	<i>Comments / remarks</i>	18
3.2	HYDROLYSIS REACTION.....	20
3.2.1	<i>Short description</i>	20
3.2.2	<i>Cycle time</i>	20
3.2.3	<i>Standard operating procedure</i>	20
3.2.4	<i>Comments / remarks</i>	21
3.3	PRECIPITATION.....	23
3.3.1	<i>Short description</i>	23
3.3.2	<i>Cycle time</i>	23
3.3.3	<i>Standard operating procedure</i>	23
3.3.4	<i>Comments / remarks</i>	23
3.4	CENTRIFUGATION.....	25
3.4.1	<i>Short description</i>	25
3.4.2	<i>Cycle time</i>	25
3.4.3	<i>Standard operating procedure</i>	25
3.4.4	<i>Comments / remarks</i>	25
3.5	DRYING.....	25
3.5.1	<i>Short description</i>	25
3.5.2	<i>Cycle time</i>	25
3.5.3	<i>Standard operating procedure</i>	25
3.5.4	<i>Miscellaneous information</i>	26
3.6	XYLENE RECOVERY.....	26
3.6.1	<i>Short description</i>	26
3.6.2	<i>Cycle time</i>	26
3.6.3	<i>Standard operating protocol</i>	26
3.6.4	<i>Comments / remarks</i>	27

CYCLANILIDE RPA90946	N° : 1.0	Rev : 1.0
CYCLANILIDE PROCESS COMMISSIONING	Clas. : RP/IND/DAP/333/2002/0002/DS	
in CEDAR West-Helena' facilities, Arkansas, USA	Sender : STEPHAN D, PARDIGON O, BERROD G., HERNO B.	
	Date : 19/12/2001	Page : 3/69

4	PERFORMANCES OF THE PROCESS	28
4.1.1	<i>Up-date of the previous improvement action plan and follow-up work</i>	28
4.1.2	<i>Coupling reaction performance</i>	29
4.1.3	<i>Hydrolysis reaction performance</i>	29
4.1.4	<i>Main conclusion about chemistry</i>	29
4.1.5	<i>Propositions in order to improve the process</i>	29
5	MAIN CONCLUSION	30
6	APPENDIX I: COUPLING REACTION, STANDARD OPERATING PROCEDURE	31
6.1	PROCEDURE.....	31
6.2	COPY OF THE RECORDS.....	31
6.3	MISCELLANEOUS DATA	34
6.3.1	<i>Evolution of the boiling points for some methanol - xylene mixtures</i>	34
6.3.2	<i>Diagrams</i>	34
7	APPENDIX II: CYCLE TIME, BOTTLENECK OF THE PROCESS	35
7.1	ANALYSIS.....	35
7.2	DIAGRAMS.....	36
7.3	CONCLUSION	37
8	APPENDIX III: CHEMICAL REACTION DATA	38
8.1	SUMMARY TABLE FOR MAIN RESULTS	38
8.2	DIAGRAMS AND TRENDS.....	39
8.2.1	<i>Stage 1, coupling reaction</i>	39
8.2.2	<i>Stage 2, hydrolysis reaction</i>	40
9	APPENDIX IV: PROCESS DATA	41
9.1	SUMMARY TABLE FOR THE MAIN FIGURES	41
9.2	DIAGRAMS AND TRENDS.....	42
9.2.1	<i>Stage 1, coupling reaction</i>	42
9.2.2	<i>Stage 2, hydrolysis reaction</i>	43
10	APPENDIX V: COPIES OF SELECTED BATCH MANUFACTURING REPORT	44
10.1	STANDARD OPERATING PROCEDURE FOR BATCH N°8	44
10.2	STANDARD OPERATING PROCEDURE FOR BATCH N°10	48
10.3	STANDARD OPERATING PROCEDURE FOR BATCH N°11	52
11	COHERENT MASS BALANCE	56
11.1	GLOBAL FLOW CHART DIAGRAMS:	56
11.2	STAGES 1 & 2 BALANCES	57
11.3	STAGE 3 AND SOLVENT RECOVERY BALANCES.....	63
12	APPENDIX VI: BIBLIOGRAPHY	69

CYCLANILIDE RPA90946	N° : 1.0	Rev : 1.0
CYCLANILIDE PROCESS COMMISSIONING	Clas. : RP/IND/DAP/333/2002/0002/DS	
in CEDAR West-Helena' facilities, Arkansas, USA	Sender. : STEPHAN D. PARDIGON O, BERROD G., HERNO B.	
	Date : 19/12/2001	Page : 4/69

Equations:

Equation 1: conversion of 2,4-DCA	5
Equation 2: measured yield of cyclanilide	6
Equation 3: measured yield of bis-amide	6
Equation 4: selectivity	6

Schemes:

Scheme 1: coupling reaction affording the "ester"	9
Scheme 2: hydrolysis reaction affording "cyclanilide-Na"	9
Scheme 3: acidification leading to "cyclanilide"	9
Scheme 4: reaction of sodium methoxide with water	10
Scheme 5: main side reaction leading to a "bis-amide" compound	10
Scheme 6: neutralisation of caustic	11

Figures:

Figure 1: block diagram for the coupling reaction	12
Figure 2: block diagram for the hydrolysis reaction	13
Figure 3: block diagram for the precipitation/centrifugation	14
Figure 4: block diagram for the xylene recovery	14
Figure 5: trends for the main parameters involved in the methanol reactive distillation	30
Figure 6: mass balance on the column head exchanger	32
Figure 7: trends for the main parameters involved in the methanol reactive distillation	32
Figure 8: trends for the main parameters involved in the methanol reactive distillation	33
Figure 9: boiling points for some methanol - xylene binary mixtures as a function of the reduced pressure	34
Figure 10: residence times and maximum volume for the apparatus	36
Figure 11: monthly and yearly production efficiency assuming various reliability rates	37
Figure 12: trends for the chemistry selectivity parameters concerning stage 1	39
Figure 13: trends for the chemistry selectivity parameters concerning stage 2	40
Figure 14: trends for the process parameters concerning stage 1	42
Figure 15: trends for the process parameters concerning stage 2	43

Tables:

Table 1: amounts of raw materials per batch	15
Table 2: evolutions of the reflux flow a function of the reduced pressure	19
Table 3: trend for the ester contents in the organic layer and its conversion	21
Table 4: trend for the methanol content in both organic and aqueous layers	22
Table 5: previous improvement action plan and follow-up work	28
Table 6: copy of the data collected during methanol reactive distillation for coupling reaction, batch N°7	31
Table 7: evolution of the boiling points [°F] for some methanol - xylene binary mixtures as a function of the reduced pressure [torr]	34
Table 8: input data and determination of the bottleneck step of the process	35
Table 9: summary of the main figures for chemistry understanding purpose	38
Table 10: summary of the main figures for process	41

CYCLANILIDE RPA90946	N° :	1.0	Rev. :	1.0
CYCLANILIDE PROCESS COMMISSIONING	Clas. :	RP/IND/DAP/333/2002/0002/DS		
<i>in CEDAR West-Helena' facilities, Arkansas, USA</i>	Sender. :	STEPHAN D. PARDIGON O., BERRON G., HERNON B		
	Date :	19/12/2001	Page :	5/89

Abbreviations
1.1 Compounds and reagents

Compounds Abbreviations	common name	RPA identifier	RN-CAS
Bis-amide	: bis 1,1-(<i>N</i> -2',4'-dichlorophenyl-carboxamide) cyclopropane	RPA111030	
CPDM	: 1,1-dicarbomethoxycyclopropane	-	[6914-71-2]
Cyclanilide	: <i>N</i> -2',4'-dichlorophenylcarboxamide -1-cyclopropylcarboxylic acid	RPA090946	[113136-77-9]
Cyclanilide-Na	: sodium <i>N</i> -2',4'-dichlorophenyl carboxamide-1-cyclopropylcarboxylate	-	
DCA or 2,4-DCA	: 2,4-dichloroaniline	-	[554-00-7]
Ester	: sodium <i>N</i> -2,4-dichlorophenyl- 1-carbomethoxy-1-cyclopropane carboxamidate	RPA093903	
Formic acid	: formic acid	-	[64-18-6]
MeOH	: Methanol	-	[67-58-1]
Xylene	: mixture of isomers 1,4-dimethylbenzene, 1,3-dimethylbenzene and 1,2-dimethylbenzene	-	[1330-20-7]

4.2. Selectivity parameters
4.3.1. Conversion of DCA reagent

For each outlet stream, we define the conversion of 2,4-DCA by the following ratio.

Equation 1: conversion of 2,4-DCA

$$TT_{DCA} = \frac{(\text{DCA initial moles number} - \text{DCA remaining moles number})}{\text{DCA initial moles number}}$$

Conversion of DCA, indicated as TT_{DCA} , is measured at the end of the reactive distillation and also at the end of the hydrolysis step, based on the mass of each organic and aqueous streams and the DCA contents from HPLC-ISTD or GC-ESTD analysis in each of these streams.

CYCLANILIDE RPA90946	N° : 10	Rev. : 1.0
CYCLANILIDE PROCESS COMMISSIONING	Clas. : RP/IND/DAP/333/2002/0002/DS	
<i>In CEDAR West-Helena facilities, Arkansas, USA</i>	Sender. : STEPHAN D., PARDIGON O., BERROD G., HERNON B.	
	Date : 19/12/2001	Page : 6/69

TT_{DCA} is considered as one of the criterion for the process and help to tune the distillation conditions for the next batch (i.e. if TT_{DCA} is lower than expected at the end of stage 1, there is nothing to do for this batch, but corrective tuning has to be performed for the next batch).

4.3.2. Yield in main product cyclanilide

For each outlet stream, we define the measured yield of cyclanilide, indicated $RR_{CA/DCA}$, by the following ratio.

Equation 2: measured yield of cyclanilide

$$RR_{CA/DCA} = \frac{\text{CA moles number}}{\text{DCA initial moles number}}$$

CA yield is measured at the end of the layer separation step. Unless otherwise indicated, the CA content in the aqueous layer referred to CA and not-CA-Na. This assay comes from a HPLC analysis. The $RR_{CA/DCA}$ has to be considered as a criterion of the process. As we know that the solubility of CA in mother liquors and waste wash water is very low, $RR_{CA/DCA}$ value gives quickly the order of magnitude for the batch yield.

4.3.3. Yield in side-product bis-amide

For organic outlet stream, we define the measured yield of bis-amide, indicated $RR_{BA/DCA}$, by the following ratio occurs during the coupling step (i.e. increase of the ester residence time with methanol species in basic conditions). We suggest taking some samples at random and still following this criterion, even the commissioning period is over.

Equation 3: measured yield of bis-amide

$$RR_{BA/DCA} = \frac{\text{BA moles number}}{\text{DCA initial moles number}}$$

The bis-amide formation is also a good criterion to check any drift in the process.

4.3.4. Selectivity in main product cyclanilide towards DCA

Selectivity on the DCA conversion into cyclanilide, indicated $RT_{CA/DCA}$, is defined as the following ratio.

Equation 4: selectivity

$$RT_{CA/DCA} = \frac{RR_{CA/DCA}}{TT_{DCA}}$$

CYCLANILIDE RPA90946
CYCLANILIDE PROCESS COMMISSIONING
in CEDAR West-Helena' facilities, Arkansas, USA

N° : 1.0 Rev. : 1.0
Clas. : RP/IND/DAP/333/2002/0002/DS
Sender : STEPHAN D., PARDIGON O., BERROD G., HERNO B.
Date : 19/12/2001 Page : 7/69

2 INTRODUCTION

2.1 Miscellaneous information about the site and the plant

1. The plant commissioning has begun on Monday December 3rd, 2001 (Aventis people arrived on Thursday, December 6th, 2001).
2. Safety induction was provided to Aventis people before getting into the site. CEDAR West-Helena site is made up of six plants. The plant where cyclanilide is produced seemed to be built about 12-13 years ago. Originally, its main purpose seemed to be a "single product dedicated plant", but most of the equipment globally fits with the one required for the cyclanilide process. The plant is cleaned and well maintained.
3. Three men per shift work for the cyclanilide plant (2x12 hours). An engineer shift has also been set up, and therefore there was always an executive in charge with the normal shift.
4. To support the commissioning team, the site management has provided an extra analytic support.
5. At the date of Thursday, December 6th, 2001, two batches have been done mostly without the assistance of Aventis people. Batch N°3 to N°11 were run in accordance with the instructions provided by Aventis people, while batch 12 was already in progress.

CYCLANILIDE RPA90946	N°.	1.0	Rev.	:1.0
CYCLANILIDE PROCESS COMMISSIONING	Clas	RP/IND/DAP/333/2002/0002/DS		
in CEDAR West-Helena ¹ facilities, Arkansas, USA	Sender :	STEPHAN D., PARDIGON O., BERRON G., HERNON B.		
	Date :	19/12/2001	Page	: 8/69

2.2 Cyclanilide process

Cyclanilide Active Ingredient is obtained thanks to a process including three main stages.

Stage 1, called "coupling reaction", is characterised by :

1. A water / xylene azeotropic dehydration step, needed to remove the last amounts of water prior to dose the sodium methoxide.
2. A reactive distillation of methanol which help to displace the equilibrium to the right (see paragraph 2.2.1.1.1, page 9).

Monitored carefully these two distillations, is of the utmost importance. Bad removal for the methanol distillation leads to a quickly decrease of the selectivity $RT_{\text{ester/DCA}}$.

Stage 2, called "hydrolysis reaction", is an ester saponification affording CA-Na, which is performed in a biphasic liquid / liquid media (see paragraph 2.2.1.1.2, page 9). Using the distillation column to store the methanol when formed during the cookout period, the methanol is then discarded from the reaction mixture when distillation starts. At the end stage 2, an organic layer and an aqueous layer were separated. Samples pulled during their transfer help to build the best intermediate molar balance of this process (TT_{DCA} , TT_{ester} , $RR_{\text{CA/DCA}}$, $RT_{\text{CA/DCA}}$, RR_{BADCA}).

Stage 3, called "precipitation/centrifugation" includes a neutralisation of CA-Na by formic acid dosing step (see paragraph 2.2.1.1.3, page 9). After the previous organic and aqueous layers separation, this is the last purification step for this process, and a selective precipitation of the active ingredient, an isolation by centrifugation, then a drying step. Special care should be taken to reach the target pH = 3,8-3,9. Until batch N°8, intermediate net mass determination on the wet cake after centrifugation and determination of its moisture were allowed and we computed the first CA isolated yield $RR_{\text{CA/DCA}}$. Final yield was computed on the dry product, taking into account its assay. After batch N°8, two cyclanilide wet cakes coming from two separate batches have been mixed together for the drying step, because of the need to hasten the production efficiency, according to the 20 T of CA target to reach before the end of 2001 year.

A xylene recovery stage is performed to recover a large part of this solvent. The organic layer separated at the end of stage 2 is redrawn into a reactor fitted with a 9-plates distillation column.

¹ Remaining water and methanol in the organic layer are first withdrawn by an azeotropic distillation. Then, a fractional distillation is performed: first cut is discarded, middle cut contains mostly pure xylene. A part of the solvent is lost to dissolve the heavy compounds and tars, remaining in the reactor bottom before they are drummed out.

¹ CEDAR's executive indicated that this column had 9 theoretical plates. Taking into account the height for the packing and the packing efficiency (random packing), Aventis people computed 7 theoretical plates. Nether the less, the efficiency, even somewhat lower than expected, should suit for the xylene recovery.

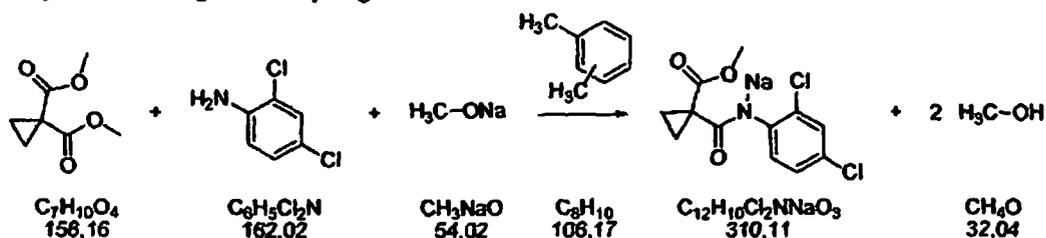
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Clas. : RP/IND/DAP/333/2002/0002/DS
Sender. : STEPHAN D., PARDIGON O., BERROD G., HERNO B.
Date : 19/12/2001 Page : 9/69

2.2.1 Chemical equations

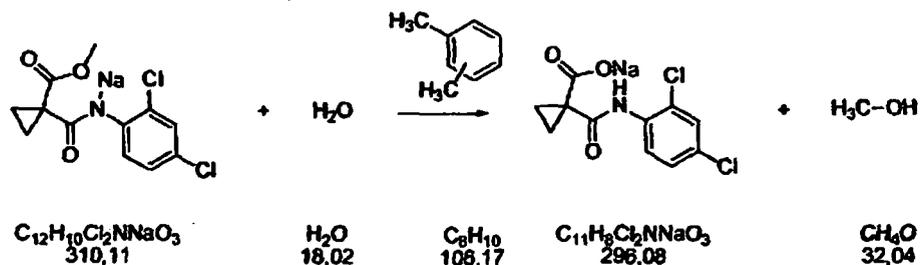
2.2.1.1 Main reactions

2.2.1.1.1 Cyclanilide stage 1, "coupling reaction"



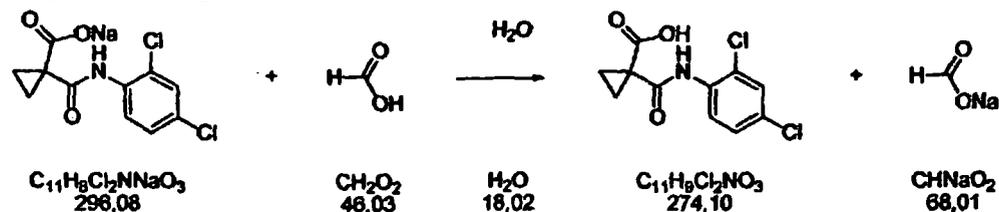
Scheme 1: coupling reaction affording the "ester"

2.2.1.1.2 Cyclanilide stage 2, "hydrolysis reaction"



Scheme 2: hydrolysis reaction affording "cyclanilide-Na"

2.2.1.1.3 Cyclanilide stage 3, "acidification"



Scheme 3: acidification leading to "cyclanilide"

CYCLANILIDE RPA90946	N° : 1.0	Rev. : 1.0
CYCLANILIDE PROCESS COMMISSIONING	Clas. : RP/IND/DAP/333/2002/0002/DS	
in CEDAR West-Helena' facilities, Arkansas, USA	Sender. : STEPHAN D., PARDIGON O., BERROD G., HERNO B.	
	Date : 18/12/2001	Page : 10/69

2.2.1.2 Side reactions

2.2.1.2.1 Sodium methoxide hydrolysis

Before the beginning of the coupling step, base hydrolysis reaction occurs if sodium methoxide is not precautionary stored or handled. Sodium hydroxide reacts with the CPDM ester functions and dramatically affects the cyclanilide global yield.

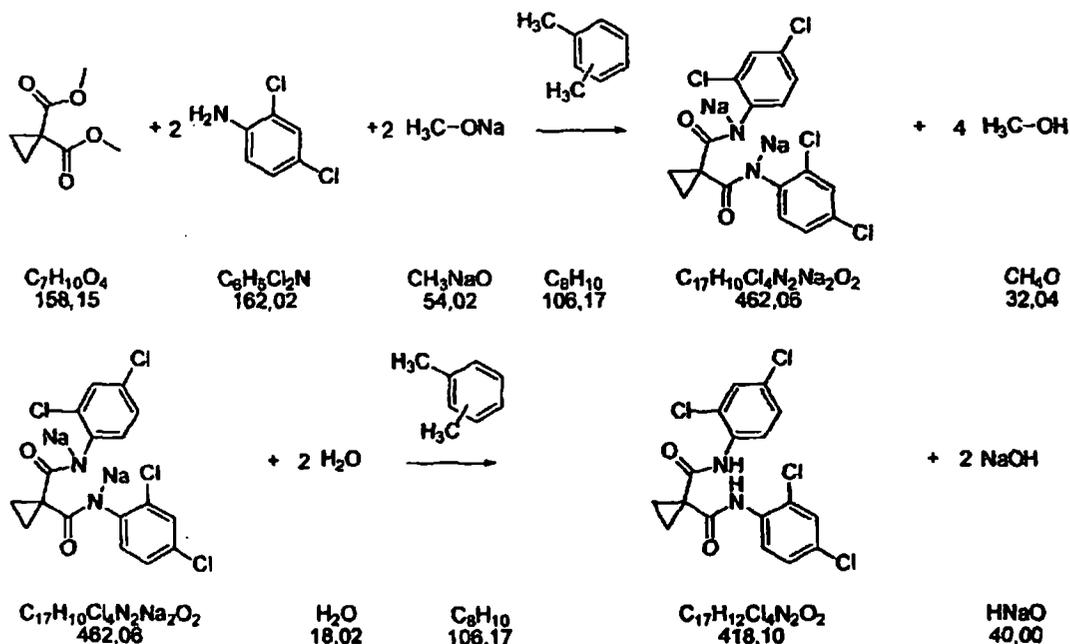
When water is added to the reaction mixture at the end of stage 1, the unconverted excess of sodium methoxide is then hydrolysed.



Scheme 4: reaction of sodium methoxide with water

2.2.1.2.2 Bis amide formation

The bis-amide formation is a side-reaction generally observed when the stage 1 global cookout time (i.e. time for sodium methoxide addition plus time for methanol distillation) increases. Because of its high affinity for the organic layer, most of bis-amide is easily withdrawn from the aqueous layer during the decantation step.



Scheme 5: main side reaction leading to a "bis-amide" compound

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CYCLANILIDE PROCESS COMMISSIONING	Clas. : RP/IND/DAP/333/2002/0002/DS	
In CEDAR West-Helena facilities, Arkansas, USA	Sender : STEPHAN D. PARDIGON O., BERROD G., HERNO B.	
	Date : 19/12/2001	Page : 11/69

2.2.1.2.3 Neutralisation of caustic

During the formic acid step, part of the formic acid neutralises the excess of caustic.



Scheme 6: neutralisation of caustic

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N° : 1.0 Rev. :1.0
 Clast : RP/IND/DAP/333/2002/0002/DS
 Sender : STEPHAN D., PARDIGON O., BERROD G., HERNO B.
 Date : 19/12/2001 Page : 12/69

2.2.2 Block diagrams

2.2.2.1 Cyclanilide stage 1, "coupling reaction" block diagram

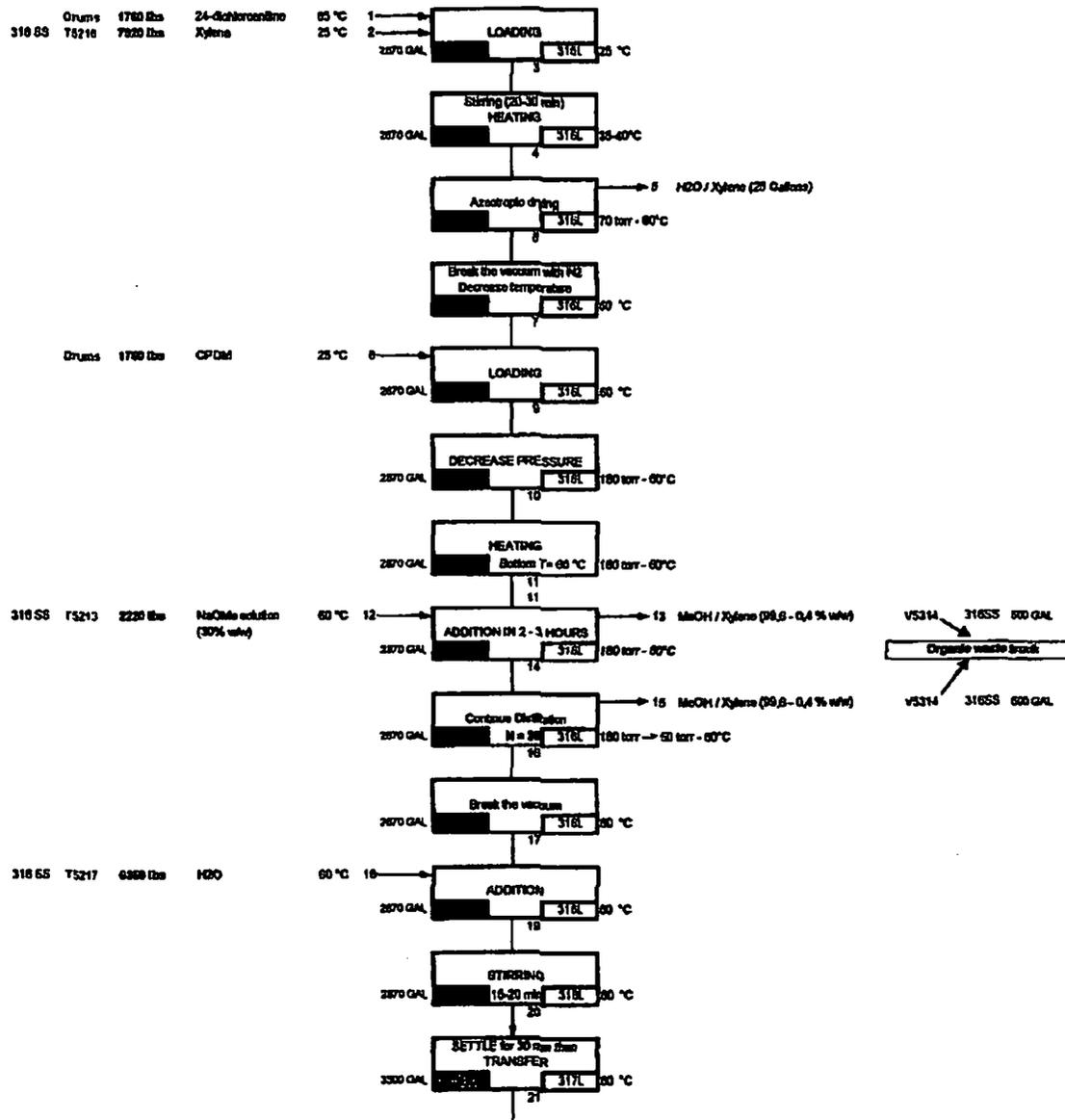


Figure 1: block diagram for the coupling reaction

CYCLANILIDE RPA90946	N° : 1.0	Rev. : 1.0
CYCLANILIDE PROCESS COMMISSIONING	Clas. : RP/IND/DAP/333/2002/0002/DS	
in CEDAR West-Helena' facilities, Arkansas, USA	Sender : STEPHAN D. PARDIGON O., BERRON G., HERNO B.	
	Date : 19/12/2001	Page : 13/69

2.2.2.2 Cyclanilide stage 2, "hydrolysis reaction" block diagram

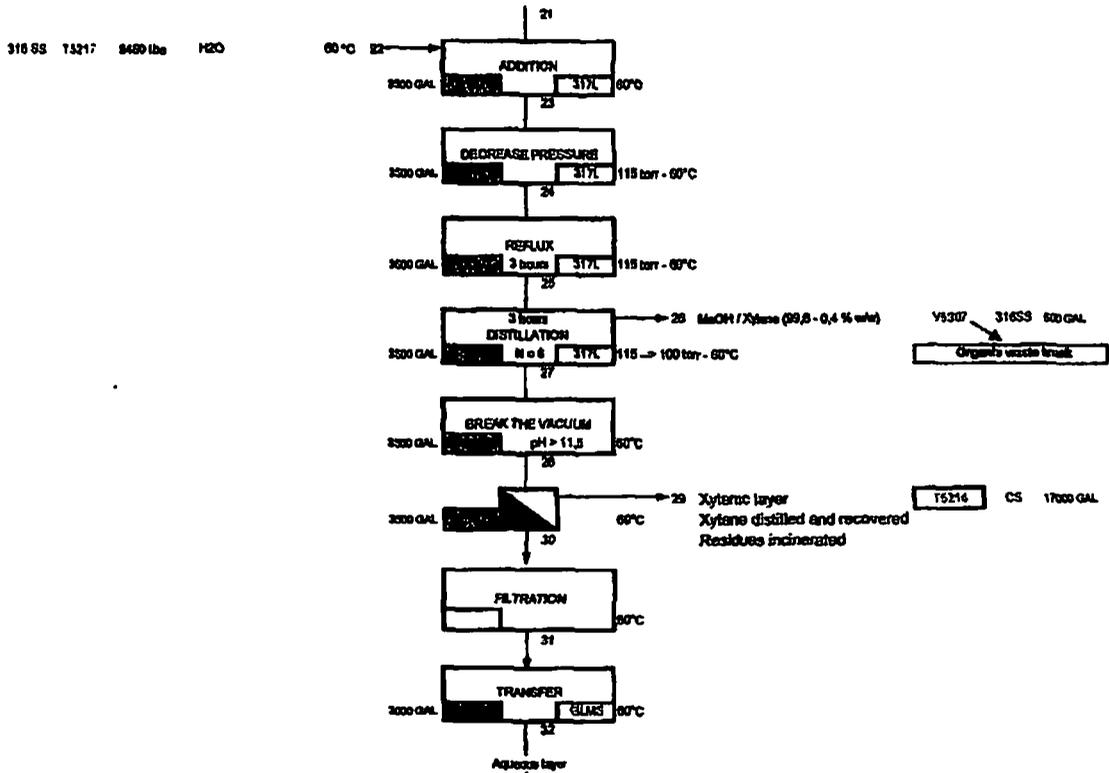


Figure 2: block diagram for the hydrolysis reaction

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CYCLANILIDE PROCESS COMMISSIONING
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N°. : 1.0 Rev. :1.0
 Clast : RP/IND/DAP/333/2002/0002/DS
 Sender : STEPHAN D., PARDIGON O., BERROD G., HERNO B.
 Date : 19/12/2001 Page : 14/69

2.2.2.3 Cyclanilide stage 3, "precipitation/centrifugation" block diagram

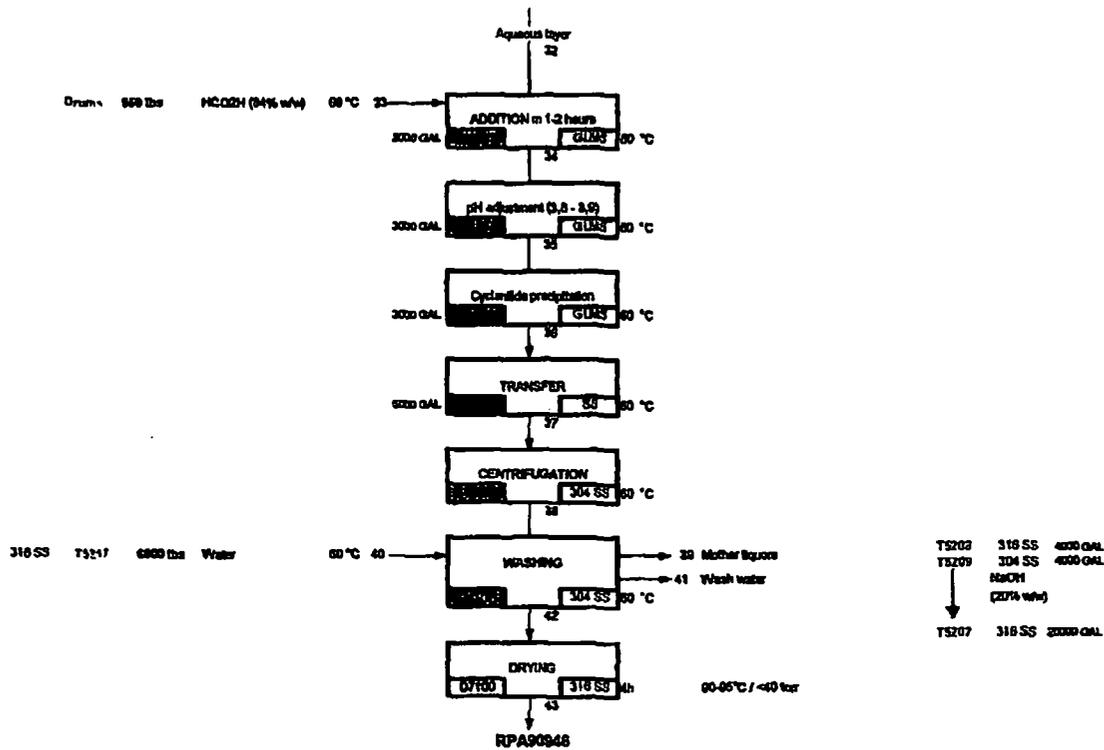


Figure 3: block diagram for the precipitation/centrifugation

2.2.2.4 Xylene recovery block diagram

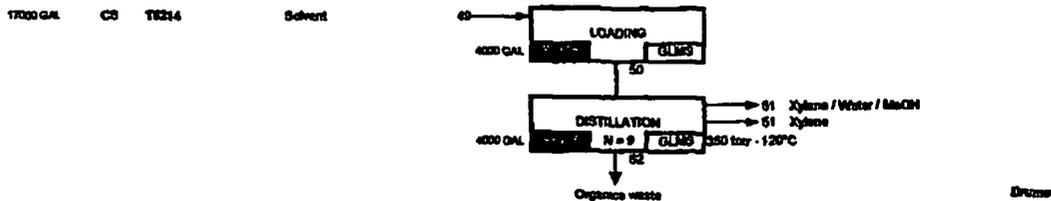


Figure 4: block diagram for the xylene recovery

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CYCLANILIDE PROCESS COMMISSIONING
in CEDAR West-Helena¹ facilities, Arkansas, USA

N° : 1.0 Rev. : 1.0
Clas. : RP/IND/DAP/333/2002/0002/DS
Sender : STEPHAN D., PARDIGON O., BERROD G., HERNO B.
Date : 19/12/2001 Page : 15/69

2.2.3 Global performances / expectations

2.2.3.1 Main targets

1. The process is designed to produce cyclanilide active ingredient, with a yield of (85±1)%.
2. The cycle time per batch was about 15 hours during the last cyclanilide campaign, roughly the same value as for the cycle time mentioned by the cyclanilide last subcontract manufacturer, DEGUSSA-HULS.
3. As showed in Table 1, page 15, with the loads of the raw materials indicated for one batch, 2575 lbs (1168 kg) of crude cyclanilide (assay > 96%) per batch are expected.
4. Therefore a production efficiency of 3307 lbs (1.5 tons) per day for a reliability factor of 100% is targeted.

Table 1: amounts of raw materials per batch

	Load [kg]	Load [lbs]
2,4-DCA	800	1760
CPDM	800	1760
MeONa solution (30% w/w)	1008	2218
Xylene (coupling reaction)	3600	7920
H ₂ O (hydrolysis reaction)	3992 = (2881+1111)	8800 = (6350+ 2450)
HCO ₂ H (85% w/w)	439	965

2.2.3.2 Miscellaneous

1. The DCA conversion should be at least up to 95%.
2. The bis-amide yield should be at the very most 5%.
3. The amount of water in wet cyclanilide, after centrifugation, is roughly 10-20%.

CYCLANILIDE RPA90946
CYCLANILIDE PROCESS COMMISSIONING
in CEDAR West-Helena facilities, Arkansas, USA

N° : 1.0 Rev. : 1.0
Class : RP/IND/DAP/333/2002/0002/DS
Sender : STEPHAN D., PARDIGON O., BERROU G., HERNO B.
Date : 19/12/2001 Page : 16/69

3 COMMENTS FOR THE PRODUCTION OF THE FIRST BATCHES

3.1 Coupling reaction

3.1.1 Short description of the required apparatus

R-5104 – 316L – 2870 GAL – purpose: coupling reactor

C-5104 – size: 23,5"Dx42'-3"T/T – purpose: distillation column for methanol reactive distillation, number of theoretical plates known by CEDAR = 30.

3.1.2 Cycle time

The best cycle time was obtained for batch 4: 13.0 hours (taking into account batches 3 to 11). See more details in Appendix II: cycle time, bottleneck of the process, page 35.

3.1.3 Standard operating procedure

1. DCA drums were heated in the hot house at 185°F in order to avoid a crystallisation of 2,4-DCA in the drums during their load into the reactor R-5104.
2. R-5104 and C-5104 equipments were checked. Reactor R-5104 was purged with nitrogen.
3. The drums were loaded into the vessel from the loading station by push – pull effect caused by nitrogen pressure – vacuum sequence. After the loading step, the drums were re-weighted again. Average technical DCA mass loaded per batch: 1759 lbs. Therefore, the net weight of the two raw materials can be considered as accurate so far (see chapter 3.1.4 Comments / remarks, page 18, paragraph 1).
4. Reactor R-5104 was purged with nitrogen.
5. Xylene (both fresh and recover) was fed into the vessel via a volumetric pump.
6. The mixture was homogenised during 10 minutes, then sampled and the amount of xylene fed was checked thanks to a GC-ESTD analysis and the net weight of DCA loaded. All the samples we analysed, showed that the xylene delivery was as expected, average xylene mass loaded per batch: 8000 lbs. The water content before starting the azeotropic distillation was measured from previous sample: order of magnitude: 700–1000 ppm.
7. The reactor was purged with nitrogen.
8. Bring column head condenser into service; brine circulation was switch on, and inlet brine temperature was checked: 12°F. Pressure was decreased gradually from 760 torr to 70 torr in fifteen minutes. Reaction mixture was heated by steam until the reaction mixture temperature reaches (173±4)°F. Allow the column head temperature to stabilise (no temperature variation over 15 minutes, set setpoint level for the intermediate distillate receiver at 10%. Check brine outlet temperature, adjust the brine flow a such a way that brine outlet temperature do not go down 36°F. Steam supply was increased until the reflux reached 25 lbs/min, while level in the intermediate distillate receiver V-5315 was kept at 10%.
 - A. The column was allowed to reach its steady state for 5 minutes, the column head temperature varied from (102±4)°F to (73±2)°F, while reflux flow was always constant (25–30 lbs/min).
 - B. Set reflux flow setpoint to 0 lbs/min and let the level increase into V-5315 from 10% to 30%.

CYCLANILIDE RPA90946
CYCLANILIDE PROCESS COMMISSIONING
In CEDAR West-Helena facilities, Arkansas, USA

N° : 1.0 Rev. : 1.0
Clas. : RP/IND/DAP/333/2002/0002/DS
Sender : STEPHAN D., PARDIGON O., BERRON G., HERMO B.
Date : 19/12/2001 Page : 17/69

C. When the V-5315 reached 30%, remove part of the distillate and let the V-5315 level decrease from 30% to 10%.

Place the column at total reflux for a five minutes period.

Repeat the procedure (A-B-C) until the overhead temperature reached 140°F, then the remaining amount of water-xylene azeotrope was continuously distilled with V-5315 level set to 10% and reflux flow set to 20 lbs/min. Distillation was stopped when the overhead temperature reached 148.6°F. The reaction mixture was sampled, the order of magnitude for water content was 200-600 ppm. The amount of distillate was computed according to the strapping table, a xylene make-up was performed according to the amount of distillate (average mass = 1180 lbs per batch). The reactor R-5104 was cooled to (140±4)°F.

9. CPDM was loaded from the drum loading station into the reactor. Same procedure for loading each drums of CPDM as for DCA drums was applied. The reaction mixture was stirred for 10 minutes then sampled and the ratio of the three compounds (xylene, DCA and CPDM) was always in accordance with expectations, up-dated average CPDM mass loaded per batch: 1758 lbs.
10. Reaction mixture temperature was stabilised to (140±2)°F.
11. Vacuum was pulled on R-5104 to a pressure of 180 torr.
12. Sodium methoxide solution was charged in the fixed volume delivery tank. A glass sight was used to check that the required amount of reactant was available.
13. The reaction mixture temperature was checked: (140±2)°F, then sodium methoxide (2283 lbs) was added to the reaction mixture into R-5104 with a mass flow rate target: 19.0-25.4 lbs/min, expected duration: 1.5-2 hours.
14. The methanol vapours reached the column head, while the column was under total reflux conditions (column head temperature = (89±1)°F, reflux flow = 30 lbs/min, volume level in the intermediate distillate receiver = 10%) for 45 minutes after dosing sodium methoxide. Once the column head temperature was stabilised, the distillation began with reflux flow = 8 lbs/min and the distillate take-off in V-5314 started. Reflux flow was adjusted to maintain the overhead temperature at (89±1)°F.
15. When the sodium methoxide dosing step was completed, the reduced pressure was gradually decreased to 50 torr in 1 hour by a ramp program. During this step, the reflux flow was adjusted to 18 lbs/min (such a way that the overhead temperature best fitted with methanol-xylene azeotrope pressure law).
16. When the reduced pressure ramp was complete, the reduced pressure was about 50 torr, no methanol was coming over, as evidence by a constant reflux flow and no output on the level controller, the reflux valve was closed. The overhead temperature increased. When the overhead temperature reached 105°F, it was decided to stop the distillation: break the vacuum and restore a nitrogen blanket.
17. Sample the reaction mixture and check DCA conversion.
18. Water, 6350 lbs, was charged into R-5104 within 5 to 10 minutes to thin the reaction mixture before the transfer.
19. Reaction mixture was stirred for 30 minutes, then stop agitator and let the reaction mixture settle for 1 hour (see CEDAR's plant manager comments in chapter 3.1.4.4 Settling time, page 19).
20. The batch was transferred to the next reactor (average mass transferred: 18541 lbs).
21. The distillate stored in V-5314 was transferred back to the R-5104 via a spray-ball to flush the reactor (ready for next batch), then transferred to the waste truck (average mass = 1799 lbs per batch).

CYCLANILIDE RPA90946	N° : 1.0	Rev. :1.0
CYCLANILIDE PROCESS COMMISSIONING	Clas. : RP/IND/DAP/333/2002/0002/DS	
in CEDAR West-Helena' facilities, Arkansas, USA	Sender. : STEPHAN D., PARIGON O., BERROD G., HERNO B.	
	Date : 19/12/2001	Page : 18/69

3.1.4 Comments / remarks

3.1.4.1 DCA drums net weight

The DCA drums were expected to weight 200 Kg (net weight). In fact, the net weight for each drum was 250 Kg; this discrepancy led to difficulties during the manual handling of the last fourth drum during the DCA loading step. Explanations: "The 3 drums of 2,4-DCA and only 50 Kg of the last fourth one are weighted before and after the discharge of the drums." It should be better and less time consuming to ask the 2,4-DCA supplier to load only 200 kg technical DCA per drum.

3.1.4.2 Influence of the duration of the coupling step

The drift for the yield we observed in the first batches prompted us to look into previous process optimisation work, and modify accordingly the standard operating procedure to reduce the time when the ester was present with large amounts of methanol. For this purpose, sodium methoxide dosing step was decreased to 1.5 hour and its subsequent methanol distillation step started about 30~40 minutes after the beginning of the sodium methoxide dosing (just the time needed for the column to reach its steady state).

1. By reducing the residence time of the reaction mixture during the coupling step, the average cyclanilide yield for batches 3 to 6 increased to reach up to 78.9%. Global optimisation of all the steps of the cyclanilide process, for stages 1 and 2, allowed to reach the target yields: batch 8: 85.4%; batch 10: 85.6%; batch 11: 85.5%.
2. In a second hand, we started the methanol reactive distillation during the sodium methoxide-dosing step. A 0:40~0:45 delay between the two steps was reasonable, since it allowed the column reaching its steady state before beginning take-off the methanol. Optimisation of the coupling stage procedure allowed to reach 3-period average yield 83.9% for batches 07-08-09 and 84.4% for batches 08-09-10 Conversion of 2,4 DCA was up 97% (target: 95%).

3.1.4.3 Improvement of the methanol reactive distillation

Since last campaign runs, the reactive methanol reactive distillation was fine-tuned again.

1. Keeping the level at its lower value (10%) into the intermediate distillate receiver V-5314 was of the utmost importance to let the column work in appropriate conditions (see Table 2, page 18).
2. Increasing the reflux ratio as a function of the column head temperature and the elapsed time was the key point of this step. The amount of waste effluents to burn decreased from 2500 lbs to 1790 lbs (-28%). The average xylene content in distillate was closer to 11~12%. The protocol to run the step is fully described in Appendix I: coupling reaction, standard operating procedure, page 31, some table and graphs are also gathered.

The main guidelines for the coupling reaction are now available, but a gradually improvement of the reflux conditions at the plant size directly, should increase the percentage of methanol in the distillate, and therefore restricts xylene losses.

CYCLANILIDE RPA90946
CYCLANILIDE PROCESS COMMISSIONING
 in CEDAR West-Helena' facilities, Arkansas, USA

N° : 1.0 Rev. :1.0
 Class : RP/IND/DAP/333/2002/0002/DS
 Sender : STEPHAN D., PARDIGON O., BERROD G., HERNO B.
 Date : 19/12/2001 Page : 18/69

Table 2: evolutions of the reflux flow a function of the reduced pressure

	Action	Reduced pressure [torr]	Reflux flow [lbs/min]	V-5315 Level [%]
	Start MeONa/MeOH dosing step within a 1:30 to 2:00 duration and total reflux on the column for about 0:40~0:45	180	25~30	10
	Distillation under constant reduced pressure, about 0:40~0:45 after the beginning of the MeONa/MeOH addition	180	8	10
	At the end of the MeONa/MeOH addition, reduced pressure ramp in one hour	180~150	18	10
	End of the reduced pressure ramp one hour after its beginning	~50	0	10
	End of the distillation when top temperature reached 105°F	~50	0	10

3.1.4.4 *Settling time*

From an optimisation point of view, there is no contraindication to reduce gradually the settling time from 1 hour to 30 minutes by testing the influence of this parameter in a test on a five batches-period. The initial intent of settling the batch was to minimise the water remaining after transfer. Moreover, the reactor was rinsed with the methanol distillate via a spray ball at the end of stage 1, then the azeotropic drying before sodium methoxide addition was performed prior the sodium methoxide dosing step.

3.1.4.5 *Miscellaneous*

1. Weight sensors for R-5104 were not accurate at all.
2. The sodium methoxide flow value was never monitored since this flow meter totalizer never worked. As the results of the two first batches were somewhat disappointed in terms of DCA conversion, both CEDAR and Aventis people decided to increase the amount of sodium methoxide. The amount to be loaded in the vessel increased from 2200 lbs to 2283 lbs of 30 w-% sodium methoxide. Due a level estimation (through a sight glass in the new sodium methoxide delivery tank CEDAR just installed for this purpose), nobody was sure of the exact amount of sodium methoxide to be delivered each batch.

CYCLANILIDE RPA90946	N° : 1.0	Rev. : 1.0
CYCLANILIDE PROCESS COMMISSIONING	Clas. : RP/IND/DAP/333/2002/0002/DS	
in CEDAR West-Helena facilities, Arkansas, USA	Sender. : STEPHAN D., PARDIGON O., BERRON G., HERNO B.	
	Date : 19/12/2001	Page : 20/69

3.2 Hydrolysis reaction

3.2.1 Short description

R-5101 – 317L – 3500 GAL – purpose: cyclanilide hydrolysis reactor

C-5101 – no data available – purpose: distillation column for hydrolysis reactor, number of theoretical plates known by CEDAR = 4, but type of packing unknown.

3.2.2 Cycle time

The best cycle time was obtained for batch 4: 10.3 hours (batches 3 to 5). See more details in Appendix II: cycle time, bottleneck of the process, page 35.

3.2.3 Standard operating procedure

1. Check R-5101 and C-5101 equipments.
2. Pressure test and purge R-5101 reactor with nitrogen.
3. The organic and aqueous were sent to R-5101 from R-5104. R-5101 agitator was started.
4. The supplement of water, 2450 lbs, was added.
5. Purge the reactor with nitrogen.
6. Vacuum was applied and the reduced pressure was gradually decreased to 200 torr, while keeping an eye on the column sight glass to check for any foam.
7. Open the steam valve on the R-5101 jacket and allow the reaction mixture temperature to stabilise at $(140 \pm 2)^{\circ}\text{F}$. As the reactor heated, methanol distilled off and condensed in E-5501B and collect in V-5307B, while reflux flow value was about (3.0 ± 0.5) lbs/min. When the level in V-5307B reached 30%, place the column under total reflux conditions. When the reaction mixture temperature reached $(140 \pm 2)^{\circ}\text{F}$, the three hours total reflux period began.
8. When the hold period is completed, adjust the pressure setpoint to 175 torr. Begin to take the methanol to the waste organic truck, while reflux flow value was about (1.5 ± 0.5) lbs/min. About 1000 lbs per batch of distillate were collected in the waste organic truck.
9. When the distillation is completed, shut off the reflux, break the vacuum and restore a nitrogen blanket.
10. Shot off the agitator and allow the batch to settle for 1 hour.
11. Check the transfer line from R-5101 to R-5103. Transfer the aqueous layer (average mass = 11480 lbs per batch) from R-5101 to R-5103. Leave the rags (located at the interface) in the organic layer. Sample the aqueous layer during the transfer. At the end of the hydrolysis reaction, it does not remain the ester group any more, ester conversion mostly up to 99%.
12. Check the line for the transfer from R-5101 to T-5214. Transfer the organic layer (average mass = 6980 lbs per batch) from R-5101 to T-5214. Sample the organic layer during the transfer.

CYCLANILIDE RPA90946
CYCLANILIDE PROCESS COMMISSIONING
 in CEDAR West-Hetena' facilities, Arkansas, USA

N° : 1.0 Rev. :1.0
 Clast. : RP/IND/DAP/333/2002/0002/DS
 Sender. : STEPHAN D., PARDIGON O., BERROD G., HERNO B.
 Date : 19/12/2001 Page : 21/69

3.2.4 Comments / remarks

3.2.4.1 *Hydrolysis reaction*

The hydrolysis started in R-5104 as soon as the water was added and mixed with xylene. Roughly 70% of the ester was converted into cyclanilide-Na before the transfer to R-5101. Sample the reactor during the transfer from R-5104 into R-5101 gave always wrong figures once its was analysed. Furthermore, the samples were not analysed as soon as they were pulled from the reactor. The results were therefore none-representative, and there was no need to maintain this analysis anymore. Three hours under total reflux then two hours of distillation were needed to bring this reaction to its completion: ester conversion was up to 99% in most of the batches. Do not try to reduce the cookout time without a kinetic study of this reaction.

Table 3: trend for the ester contents in the organic layer and its conversion

	Batch 3	Batch 4	Batch 5	Batch 6	Batch 8
Ester content in aqueous layer	0.7%	0.6%	0.3%	<0.1%	<<0.1%
TT _{ester}	98.9%	99.2%	>99.5%	>99.5%	>99.5%

3.2.4.2 *Working point for the column under total reflux conditions*

The working point was a compromise between the reduced pressures (enough low to remove the methanol, but not a too high value to avoid losses of too much xylene) and the steam introduced in the vessel jacket. At 195 torr, the reflux flow that was sent back to the column reached only 87 kg/h, a value which a rather low. Trying to increase the thermal power, we observed a positive drift of the reduced pressure that could not decrease down to 210 torr (the vacuum control valve was 100%-opened. It seems that some methanol should pass through this condenser. Trying to increase the brine inlet-outlet difference of temperature by increasing its flow, the vacuum was somewhat better: 190 torr. As the brine inlet temperature was 14°F, we did not want to go down 36°F to avoid any risk of freezing water distilled with the azeotrope.

CEDAR's plant manager explanations were listed underneath:

"The vacuum problems observed were due to discontinued use of the primary condenser. Without the primary condenser, the pressure drop between the primary and secondary condensers becomes a problem. With the primary condenser in service, it is now possible to reduce pressure to 150 torr. However, reduced pressure still does not result in the expected increase in reflux."

CYCLANILIDE RPA90946	N° : 1.0	Rev. :1.0
CYCLANILIDE PROCESS COMMISSIONING	Clas. : RP/IND/DAP/333/2002/0002/DS	
in CEDAR West-Helena' facilities, Arkansas, USA	Sender. : STEPHAN D., PARDIGON O., BERROD G., HERNO B.	
	Date : 19/12/2001	Page : 22/69

3.2.4.3 Check for the amount of remaining methanol at the end of the distillation.

Since last campaign, we knew that the methanol removal was of the utmost importance. An analysis to check the methanol contents in both aqueous layer and in xylene layer was done in order to check that the entire methanol was distilled. The results showed low amounts of methanol remaining in both aqueous layer and in organic layer.

Table 4: trend for the methanol content in both organic and aqueous layers

Methanol content	Batch 4	Batch 5	Batch 6	Batch 8	Batch 9
Organic layer	0.4%	<0.1%	<0.1%	<0.1%	<0.1%
Aqueous layer	2.1%	1.0	0.8%	1.6%	0.6%

3.2.4.4 Miscellaneous

1. Because we first do not dare to freeze the water coming at the column head with the water-xylene azeotrope with two condensers supplied with brine, the small one was bypassed.
Then, because they believed that there was enough methanol in the distillate to prevent the water from freezing, CEDAR people has decided to feed again the small condenser with brine (see CEDAR's plant manager comments in chapter 3.2.4.2, page 21).
2. The decantation was very good, no issues were neither reported, nor heard. As expected, the rags found at the interface at low amounts, were send with the organic layer. Separation was done visually, conductivity measurement was found to be too unreliable.
3. Currently, the layer separation at the end of the coupling stage, rags remain into the organic layer. To improve the xylene recovery yield, we propose to remove selectively the rags located at the interface, by applying the following procedure: -
 - a. transfer the aqueous layer into the precipitation reactor R-5103, as described in the current SOP.
 - b. transfer rags plus a small amount of xylene into the waste organic truck.
 - c. transfer the organic layer in the storage tank T-5214.
 With this slightly modified procedure, we should avoid insoluble water in the waste xylene to be recovered.

CYCLANILIDE RPA90946
CYCLANILIDE PROCESS COMMISSIONING
in CEDAR West-Helena' facilities, Arkansas, USA

N° : 1.0 Rev. : 1.0
Clas. : RP/IND/DAP/333/2002/0002/DS
Sender : STEPHAN D., PARDIGON O., BERRON G., HERNO B.
Date : 19/12/2001 Page : 23/69

3.3 Precipitation

3.3.1 Short description

R5103 – GLMS – 3000 GAL – purpose: cyclanilide precipitation reactor
V-5312 – SS – 5000 GAL – purpose, centrifuge feed tank

3.3.2 Cycle time

The best cycle time for the precipitation reactor R-5103 was obtained for batch 5: 3.8 hours (B3-B5). See more details in Appendix II: cycle time, bottleneck of the process, page 35.
The best cycle time for the centrifuge relay V-5312 was obtained for batch 5: 5.6 hours.
Considering its large storage capacity, its did affect the global cycle time of the process.

3.3.3 Standard operating procedure

1. The reactor R-5103 was checked before receiving the aqueous layer from R-5101.
2. A pressure test was performed on reactor R-5103.
3. The aqueous layer was transferred from R-5101 to R-5103. R-5103 stirrer and recirculation pump loop were switch on. Reaction mixture temperature was stabilised at $(140\pm 2)^{\circ}\text{F}$.
4. The gross weight for formic acid drums was measured on the scale. An amount of formic acid equivalent to 80% of the theoretical mass computed was dosed in about 00:45. The reaction mixture was stirred at $(140\pm 2)^{\circ}\text{F}$ for 15 minutes. The pH of the reaction mixture was then carefully checked under stirring, and formic acid was added portion-wise via a diaphragm pump until the target value for pH was reached.
5. A sample was then pulled from the reaction mixture, and pH was check on more time at the laboratory to ensure of the pH value. The drums of formic acid (250 Kg each) were weighed to compute the net weight of formic acid dosed into the reactor. So, the weight of this raw material was accurate.
6. The reaction mixture was transferred in the centrifuge feed tank V-5312. For the commissioning period, special care was taken to transfer the entire precipitated product by washing the vessel wall with water.
7. The reaction mixture was stored in V-5312. Agitator and recirculation loop pump were started up.
8. The centrifuge was fed from the centrifuge relay V-5312.

3.3.4 Comments / remarks

For the two first batches, we have had a problem with the pH probe (pH meter in the plant was re-calibrated after the first batch and CEDAR's plant manager has decided that it shall be re-calibrated at least once time per week). The indication was worse so the amount of formic acid was too high (10%-15% more than for the theory). A new probe has been installed for the batch N°3, so the problem was considered as solved, since pH measured by the two different probes were the same.

As checked during the previous campaign, the amount of cyclanilide in mother liquors was down to 0.03 w-% (this figure represented a lost in cyclanilide yield less than 0.1%).

CYCLANILIDE RPA90946
CYCLANILIDE PROCESS COMMISSIONING
in CEDAR West-Helena facilities, Arkansas, USA

N° : 1.0 Rev : 1.0
Clas : RP/IND/DAP/333/2002/0002/DS
Sender : STEPHAN O., PARDIGON O., BERROD G., HERNO B.
Date : 19/12/2001 Page : 24/69

We would like to repeat the recommendations written out during the previous campaign. In case of a possible plant shutdown, cyclanilide batch should be stored in the most appropriate conditions: -

1. Nitrogen blanket.
2. If formic acid has already been added to the precipitation vessel and pH reaches 3.8, decrease the reaction temperature in vessel V-5312 or R-5103 at 70°F (20°C).
3. If formic acid has not been yet added, add formic acid and adjust pH=7 (versus pH=12~13) in order to minimise the hydrolysis of amid group, then decrease the reaction temperature in vessel V-5312 or R-5103 at 70°F (20°C).

Before to start the centrifugation, it will be necessary to heat the solution to 140°F (60°C). No comment to express for this re-commissioning. We repeat the other recommendations written out during the previous campaign.



RHONE-POULENC INDUSTRIALISATION

CYCLANILIDE RPA90946	N° :	1.0	Rev. :	1.0
CYCLANILIDE PROCESS COMMISSIONING	Clas. :	RP/IND/DAP/333/2002/0002/DS		
in CEDAR West-Helena facilities, Arkansas, USA	Sender :	STEPHAN D., PARDIGON O., BERRON G., HERNO B.		
	Date :	19/12/2001	Page :	25/69

3.4 Centrifugation

3.4.1 Short description

CF5701 – 304SS – Basket diameter = 1.219 meter – Basket height = 0.914 meter – Filtration area = 3.5 m² – Type of discharge = knife discharge – Type of washing bar = Feed pipe.

3.4.2 Cycle time

Six loads are done per batch. As the cycle time per load is 1.5 hour, the cycle time per batch is 10 hours. The best cycle time was: 9.8 hours. See more details in Appendix II: cycle time, bottleneck of the process, page 35.

3.4.3 Standard operating procedure

1. 20% diluted caustic (350–400 gallons) was loaded in the mother liquors receiver tank T-5208.
2. The centrifuge was fed from the centrifuge relay V-5312.
3. Mother liquors (9000 lbs per batch, difficult to get a more accurate value) were stored in T-5208. Mother liquors were sampled for analytical purposes.
4. The cake was washed with water, 90 gallons per centrifuge load.
5. The wastewater washes (552 gallons per batch) are collected in T-5208.
6. A normal batch size led to 6 centrifugations per batch. The damp cake was collected into supersacks (one batch was collected in three to four supersacks).
7. Supersacks were stored in a warehouse before drying.

3.4.4 Comments / remarks

Centrifugation step proceeded smoothly at in CEDAR's facilities, whereas the same centrifugation step was the bottleneck in the DEGUSSA-HULS plant. Increasing the reaction mixture temperature for the centrifugation from 20°C to 60°C was indeed a real process improvement. The amount of water remaining in the wet cyclanilide is about 10% (versus 18% for DEGUSSA-HULS).

3.5 Drying

3.5.1 Short description

D7100 – 316SS – purpose: bicone dryer.

3.5.2 Cycle time

The best cycle time was 21 hours for drying 2 batch. Until batch N°8, only one batch will be separately dried, then wet cyclanilide is dried per 2 batches.

3.5.3 Standard operating procedure

The only recommendation concerning the drying step is not to exceed a temperature upper than 203°F (95°C) and to use a good vacuum (20 torr).

CYCLANILIDE RPA90946	N° : 1.0	Rev. :1.0
CYCLANILIDE PROCESS COMMISSIONING	Clas. : RP/IND/DAP/333/2002/0002/DS	
In CEDAR West-Helena' facilities, Arkansas, USA	Sender. : STEPHAN D., PARDIGON O., BERRON G., HERNO B.	
	Date : 18/12/2001	Page : 26/69

3.5.4 Miscellaneous information

ACS headquarters insists on the aesthetic appearance for the active ingredient: avoid making lump when drying. Investigations concerning the discharge from the "bicone" dryer to the drums includes a grinder, with a sieve with a side draining-off to remove continuously the lumps. Furthermore, visual appearance of the product, which has just packaged shows no lumps at all.

3.6 Xylene recovery

3.6.1 Short description

R-5105 – GLMS – 4000 GAL – purpose: xylene recovery pot

C-5105 – SS316 – distillation column for xylene recovery, number of plates indicated by CEDAR people 9.

The xylene recovery is currently on going.

3.6.2 Cycle time

Cycle time for xylene recovery is currently 16 hours, but it can be easily decreased to 12 hours. Two batches of organic layer were gathered and led to one xylene recovery batch. At the present date, only one xylene recovery was run. See more details in Appendix II: cycle time, bottleneck of the process, page 35.

3.6.3 Standard operating protocol

1. Purge reactor R-5105 with nitrogen.
2. Transfer the xylene-water distillate coming from the coupling dehydration step from V-5314 to R-5105.
3. Transfer the organic layer from R-5101 to R-5105 coming from the hydrolysis stage.
4. Switch on the stirrer.
5. Set reduced pressure setpoint to 580 torr.
6. Open the brine inlet valve on the condenser (brine inlet temperature = 15°F).
7. Set level in the intermediate receiver V-5317 to 20%; adjust steam pressure setpoint to about 350 lbs/hour accordingly.
8. Allow the column to reach its steady state under total reflux conditions (overhead temperature constant within a 10 minutes period) for 15 minutes.
9. Stop the reflux flow which was sent back to the column and let the distillate level raise in the intermediate distillate receiver V-5317 from 20% until the level reached 50%.
10. Collect the first cut distillate into T-5210 by decreasing the V-5317 level from 50% to 20%.
11. Once part of the distillate was removed from the intermediate receiver, place the column under total reflux for a 5-minutes period.
12. Apply the same procedure as described in paragraphs 9 to 11 until the column head temperature reached 254°F.
13. When the column head temperature reached 254°F, the reduced pressure was gradually decreased from 580 to 200 torr, while applying the same procedure described in paragraphs 9 to 11. Sample the distillate in the intermediate receiver flask every hour and check the water content in the xylene. When the water content was lower than 2000 ppm, stop the current procedure and prepare to collect the middle cut.

CYCLANILIDE RPA90946	N° : 1.0	Rev. : 1.0
CYCLANILIDE PROCESS COMMISSIONING	Clas. : RP/IND/DAP/333/2002/0002/DS	
in CEDAR West-Helena facilities, Arkansas, USA	Sender. : STEPHAN D., PARDIGON O., BERRON G., HERNO B.	
	Date : 19/12/2001	Page : 27/69

14. Distil continuously the middle cut and take-off the distillate with V-5317 opening set to 50% until the reaction mixture temperature reached 240°F.
15. When the reaction mixture temperature reached 240°F, stop the steam supply on R-5105, break the vacuum and restore a nitrogen blanket.
16. Purge the reactor R-5105 content (distillation residue) every two xylene recovery batches. Distillation residue was transferred to waste organic truck.
17. First xylene recovery run led to a 57%-recovery yield (target: 90%), optimisation was still in progress. Below are listed some comments from CEDAR's plant manager concerning the xylene recovery itself: -
 - a. Actual recovery is higher than 57%.
 - b. Most of xylene removed during light compounds cut is recycled back to the Organic Hold Tank T-5214.

At the end of the dehydration step of coupling reaction, the mixture water-xylene was sent to R-5101, the two layers were allowed to settle then separated. At the interface, a small amount of xylene must be purged with the water (in order to improve the xylene recovery yield, no insoluble water must remain in the xylene layer).

3.6.4 Comments / remarks

1. Please, take into account the previous remark, that the smallest amount of water withdrawn with the xylene layer will dramatically affect the xylene recovery yield.
2. During the take-off of first distillation cut, the removal of light compounds performed with a continuous distillation (instead of filling the emptying part of the intermediate receiver) should reduce the mass of the first cut, and therefore increase the xylene recovery yield.

CYCLANILIDE RPA90946	N° : 1.0	Rev. : 1.0
CYCLANILIDE PROCESS COMMISSIONING	Clas. : RP/IND/DAP/333/2002/0002/DS	
in CEDAR West-Helena' facilities, Arkansas, USA	Sender. : STEPHAN D., PARDIGON O., BERROD G., HERNIO B.	
	Date : 19/12/2001	Page : 28/69

4 PERFORMANCES OF THE PROCESS

During the previous 2001 campaign, batches N°5 to N°6 affords cyclanilide in 85% chemical yield. Previous batches N°1 to N°4 could not be taken into account, because of water pH issue that was responsible for a cyclanilide lost in wastewater reaching 15%.

4.1.1 Up-date of the previous improvement action plan and follow-up work

Hereafter are listed the main items identified during the last campaign for a process improvement (see paragraph 3 page 69).

Table 5: previous improvement action plan and follow-up work

Previous recommendations from Aventis' point of view	Action
The efficiency of the methanol distillation could be improved by looking carefully to the differential pressure transmitters between the top and the bottom of the distillation column (avoid any risk of flooding is the purpose of this measurement).	The operators monitored sometimes the differential pressure during the distillation.
To check the methanol content in the reaction mixture by GC-ESTD analysis allows controlling the distillation efficiency and the distillation fine-tuning. If some methanol remains in the reaction mixture after the distillation step, it is likely that it will be mostly found in the aqueous and organic layers after the hydrolysis step. As a consequence, the amount of aqueous effluent to recover would increase.	The methanol content was measured by sampling the reaction mixture each batch during the commissioning.
As the centrifugation is not the bottleneck of the cyclanilide process so far, avoid overloading the centrifuge.	
The weight cells for the reactors R-5104, R-5101 and R-5103 do not allow to build a reliable mass balance.	R-5101 weight cells gave now accurate values.

New recommendations from Aventis' point of view	Action
The main purpose for the methanol reactive distillation in the coupling reaction, is to remove the methanol as quickly as possible. As soon as the column reached its steady state (current time to obtain a column head temperature stable: 30~40 minutes after dosing sodium methoxide), start take-off of distillate. Increase the reflux ratio when the reduced pressure is decreased from 180 to 50 torr. Suppress any reflux when the reduced pressure reached 50 torr to displace methanol in the column hold-up.	

CYCLANILIDE RPA90946
CYCLANILIDE PROCESS COMMISSIONING
in CEDAR West-Helena[®] facilities, Arkansas, USA

N° : 1.0 Rev. : 1.0
Clas. : RP/IND/DAP/333/2002/0002/DS
Sender : STEPHAN D., PARDIGON O., BERROD G., HERNO B.
Date : 19/12/2001 Page : 29/69

4.1.2 Coupling reaction performance

Batches 8, 10 and 11 clearly showed that good performances could be obtained: -

1. DCA conversion reached higher values: $TT_{DCA} = 97\%$,
2. Ester yield computed by the formula $RR_{ester/DCA} = RR_{ester/DCA}$ (ester found in aqueous layer) + $RR_{CA/DCA}$ (CA-Na found in aqueous layer), reached the target value: $RR_{CA/DCA} = 85\%$.

4.1.3 Hydrolysis reaction performance

Batches 8, 10 and 11 clearly showed that good performances could be obtained: -

1. Ester conversion reached the expected value, $TT_{ester} \geq 99\%$,
2. Cyclanilide yield was the best yield we obtained, $RR_{CA/DCA} = 85\%$.

4.1.4 Main conclusion about chemistry

Once coupling reaction was fine-tuned, chemistry gave expected performances. Process is now on the right tracks: cyclanilide pure/pure yield: $RR_{CA/DCA} = 85\%$.

4.1.5 Propositions in order to improve the process

Optimise the sodium methoxide dosing rate, according the removal rate of methanol by distillation.

CYCLANILIDE RPA90946	N° : 1.0	Rev. :1.0
CYCLANILIDE PROCESS COMMISSIONING	Clas. : RP/IND/DAP/333/2002/0002/DS	
in CEDAR West-Helena' facilities, Arkansas, USA	Sender. : STEPHAN D., PARDIGON O., BERRON G., HERNO B.	
	Date : 19/12/2001	Page : 30/69

5 MAIN CONCLUSION

The next trend presented on Figure 5, page 30, clearly illustrates that a 85%-measured yield for cyclanilide was reached for batches 8, 10 and 11 (unfortunately, a maloperation during water dehydration for batch 9 decreased the amount of DCA initially loaded into the vessel, which affected the cyclanilide yield).

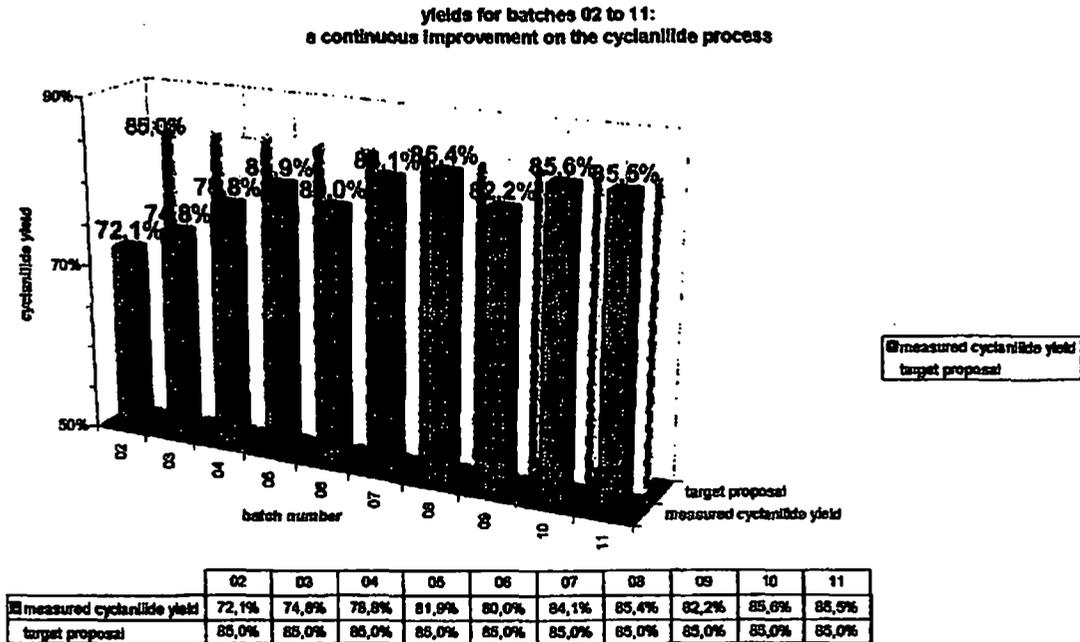


Figure 5: trends for the main parameters involved in the methanol reactive distillation

During the last debriefing meeting with CEDAR headquarters persons, all the people agreed that an 85%-cyclanilide chemical yield was reachable, based on the results obtained during this re-commissioning period. Available analysis we have got in hand at this date, showed unambiguously that the product such proceeded matched the **Active Ingredient specifications**.

CEDAR's plant manager indicated the expected cycle time for its unit: 14 hours, which should allow to reach 1.5 T/day of technical cyclanilide.

CYCLANILIDE RPA90946
CYCLANILIDE PROCESS COMMISSIONING
 in CEDAR West-Helena' facilities, Arkansas, USA

N° : 1.0 Rev. :1.0
 Clast : RP/IND/DAP/333/2002/0002/DS
 Sender : STEPHAN D., PARDIGON O., BERROD G., HERNO B.
 Date : 19/12/2001 Page : 31/69

6 APPENDIX I: COUPLING REACTION, STANDARD OPERATING PROCEDURE

6.1 Procedure

The reactive distillation was run according the procedure-described *in-extenso* at chapter 3.1.3 Standard operating procedure, page 18, paragraphs 14, 15 and 16. An example of the data collected during the batch N°7 is provided in Table 6, page 31. Input data needed to run properly the reactive distillation are given in Table 7, page 34 and on Figure 9, page 34.

6.2 Copy of the records

Table 6: copy of the data collected during methanol reactive distillation for coupling reaction, batch N°7

time [hh:mm]	elapsed time [hh:mm]	reduced pressure [mm]	mass temperature [°F]	column head temperature [°F]	reflux flow [lb/min]	volume in V5314 [m³]	mass MeOH distillate [kg]	comments
03:40	00:00	180	140,4	85,0	-	-	-	
04:05	00:25	178	135,0	88,7	-	-	-	
04:08	00:28	178	135,0	90,3	25,0	0,3	10	
04:15	00:35	180	136,0	88,7	20,1	0,5	71	
04:20	00:40	180	136,0	88,1	15,0	-	-	
04:26	00:46	180	137,0	87,8	16,0	1,0	150	Change setpoint on reflux flow from 15 to 10 lb/min
04:30	00:50	180	137,7	87,9	10,0	-	-	
04:40	01:00	180	137,0	87,9	8,0	2,0	289	
04:50	01:10	180	137,0	87,9	8,0	4,2	358	
04:55	01:15	180	137,0	87,9	5,0	5,5	408	
05:00	01:20	180	137,0	87,8	8,0	8,0	455	
05:05	01:25	180	137,0	87,9	8,0	12,0	554	
05:10	01:30	180	138,8	87,7	8,0	17,0	634	
05:15	01:35	180	138,5	87,7	8,0	-	-	
05:20	01:40	180	138,5	87,7	8,0	21,0	777	
05:25	01:45	180	140,0	87,7	8,0	24,0	851	
05:30	01:50	180	141,0	87,8	8,0	27,0	925	
05:35	01:55	180	141,0	87,8	8,0	30,7	1 009	End of the sodium methoxide dosing step
05:40	02:00	180	142,8	87,8	8,0	32,8	1 080	Beginning of the reduced pressure ramp
05:45	02:05	170	143,8	81,3	14,0	36,0	-	
05:50	02:10	155	145,0	84,7	18,0	37,7	1 200	
05:55	02:15	156	145,1	82,2	22,0	38,5	1 223	
06:05	02:25	-	136,0	78,0	18,0	39,0	1 223	
06:20	02:40	110	128,4	68,9	18,0	38,8	1 223	
06:30	02:50	91	126,0	65,5	1,4	39,0	1 232	
06:35	02:55	80	123,0	62,1	1,4	44,5	1 347	
06:40	03:00	70	119,0	59,0	1,4	47,5	1 421	
06:50	03:10	60	118,0	65,0	1,4	53,6	1 570	
07:00	03:20	51	118,7	50,0	1,4	68,4	1 844	
07:15	03:35	48	122,8	104,8	0,7	69,7	1 735	End of the reduced pressure ramp
07:25	03:45	60	126,3	110,9	0,9	63,4	1 800	

The three following figures (Figure 6: mass balance on the column head exchanger and Figure 7: trends for the main parameters involved in the methanol reactive distillation, page 32 and Figure 8: trends for the main parameters involved in the methanol reactive distillation, page 33) illustrate clearly the trends for the main parameters involved in the distillation. Each time the column head temperature deflects from its theoretical value, the reflux flow L [lbs/min] is increased gradually until the column head temperature reaches the target value.

CYCLANILIDE RPA90946
CYCLANILIDE PROCESS COMMISSIONING
 in CEDAR West-Helena facilities, Arkansas, USA

N° : 1.0 Rev. :1.0
 Clast. : RP/IND/DAP/333/2002/0002/DS
 Sender. : STEPHAN D., PARDIGON O., BERROD G., HERNO B.
 Date : 19/12/2001 Page : 32/69

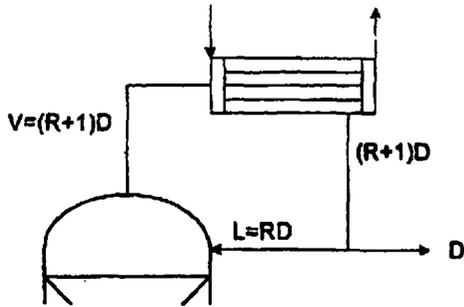


Figure 6: mass balance on the column head exchanger

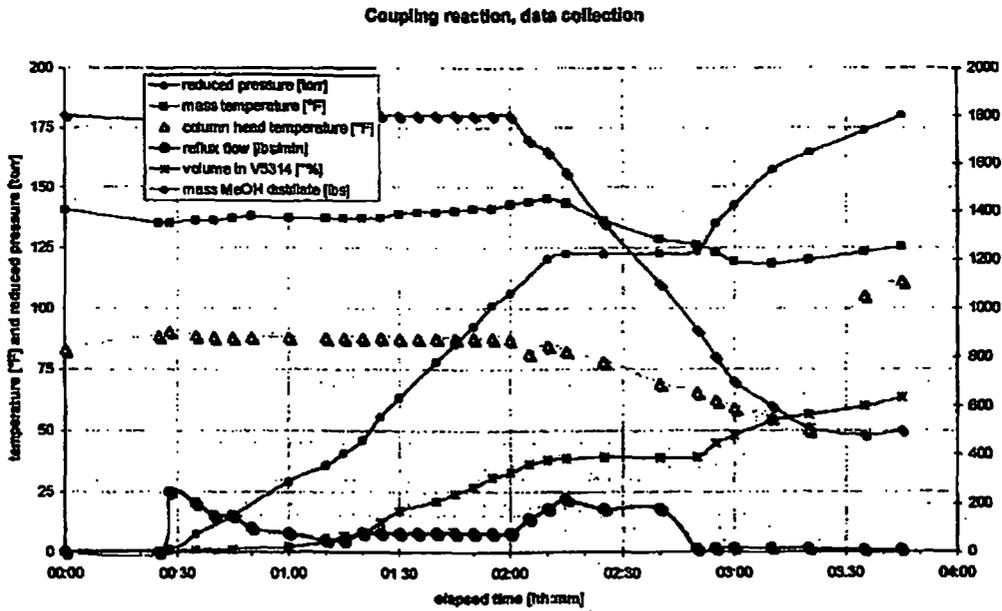


Figure 7: trends for the main parameters involved in the methanol reactive distillation

CYCLANILIDE RPA90946
CYCLANILIDE PROCESS COMMISSIONING
in CEDAR West-Helena facilities, Arkansas, USA

N° : 1.0 Rev. : 1.0
Clas. : RP/IND/DAP/333/2002/0002/DS
Sender. : STEPHAN D., PARDIGON O., BERROD G., HERNIO B.
Date : 19/12/2001 Page : 33/69

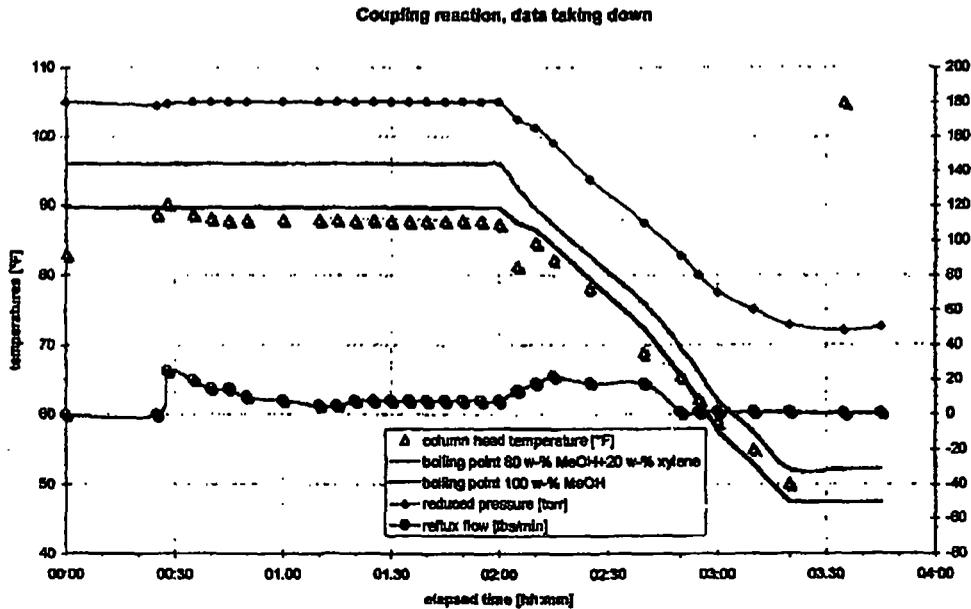


Figure 8: trends for the main parameters involved in the methanol reactive distillation

To run the reactive distillation properly, the column head temperature trend should always best fit with the red curve (theoretical boiling point value for 100 w-% methanol under the known reduced pressure).

Such kind of control can be easily achieved by increasing the reflux flow L [lbs/min] as a function of the elapsed time (see values in Table 6, page 31) each time a temperature drift is observed. This correction is easy to realise until the reduced pressure is up to 100 torr.

As the pressure is reduced, there is less and less methanol to distil, so there is no methanol in required amount to maintain the overhead temperature at the target value, even when the reflux flow is increased. We observed this phenomenon when the reduced pressure is down to 80~100 torr. The overhead temperature drifts from the red curve and is located between the red curve (100% methanol) and the grey curve (85 w-% methanol and 15 w-% xylene). Obviously, some xylene is now took-off, but there is no other solution to perform this distillation and bring the reaction to completion with respect to the limiting cycle time. A compromise between good yields and xylene contents in the methanol distillate has to be found.

CYCLANILIDE RPA90946
CYCLANILIDE PROCESS COMMISSIONING
 in CEDAR West-Helena' facilities, Arkansas, USA

N°. : 1.0 Rev. :1.0
 Clast. : RP/IND/DAP/333/2002/0002/DS
 Sender. : STEPHAN D., PARDIGON O., BERROD G., HERNO B.
 Date : 19/12/2001 Page : 34/69

6.3 Miscellaneous data

6.3.1 Evolution of the boiling points for some methanol - xylene mixtures

Table 7: evolution of the boiling points [°F] for some methanol - xylene binary mixtures as a function of the reduced pressure [torr]

reduced pressure [torr]	theoretical column head temperature [°F]					
	pure MeOH	MeOH+xylene 2 weight-% (0,91% molaire)	MeOH+xylene 5 weight-% (1,56% molaire)	MeOH+xylene 10 weight-% (3,25% molaire)	MeOH+xylene 20 weight-% (7,0% molaire)	MeOH+xylene 30 weight-%
200	93,4	93,5	93,6	93,9	96,0	
190	91,5	91,6	91,7	92,1	94,2	
180	89,5	89,6	89,7	90,1	92,3	
170	87,5	87,5	87,7	88,0	90,3	
160	85,3	85,4	85,5	85,8	88,3	
150	83,0	83,1	83,2	83,5	86,1	
140	80,6	80,7	80,8	81,1	83,8	
130	78,0	78,1	78,2	78,5	81,4	
120	75,3	75,3	75,5	75,8	78,8	
110	72,3	72,4	72,5	72,8	76,0	
100	69,1	69,2	69,3	69,6	72,9	
90	65,7	65,7	65,8	66,1	69,6	
80	61,9	61,9	62,0	62,3	66,0	
70	57,8	57,7	57,8	58,1	62,0	
60	52,8	52,8	53,0	53,2	57,4	
50	47,2	47,3	47,4	47,7	52,2	
40	40,6	40,7	40,8	41,0	45,9	58,8

6.3.2 Diagrams

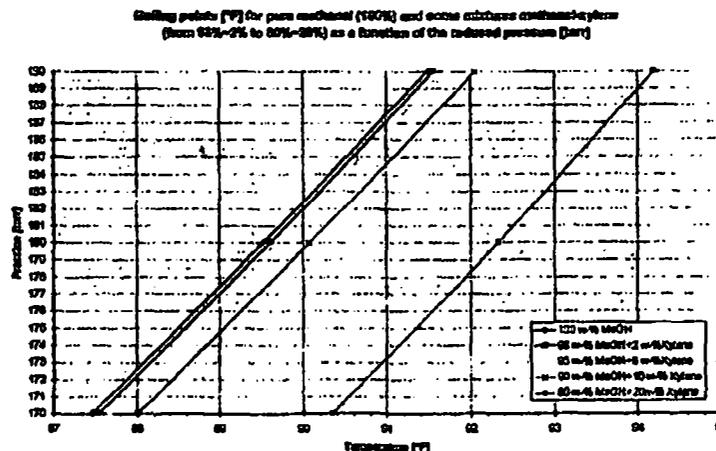


Figure 9: boiling points for some methanol - xylene binary mixtures as a function of the reduced pressure

CYCLANILIDE RPA90946
CYCLANILIDE PROCESS COMMISSIONING
in CEDAR West-Helena facilities, Arkansas, USA

N° : 1.0 Rev. : 1.0
Clas. : RP/IND/DAP/333/2002/0002/DS
Sender : STEPHAN D., PARDIGON O., BERROD G., HERNO B.
Date : 19/12/2001 Page : 35/69

7 APPENDIX II: CYCLE TIME, BOTTLENECK OF THE PROCESS

7.1 Analysis

The data presented in Table 8 (see below) and diagrams presented on Figure 10, page 36, were computed assuming a pure/pure cyclanilide yield equal to 85.0%. Residence times were determined from the data collected in the batch manufacturing report.

Table 8: Input data and determination of the bottleneck step of the process

Equipments	Main sections	Function	Full storage capacity [m ³]	Maximum volume [m ³]	Max. operating volume [m ³]	Possible duration (real) [h]	Theoretical duration [h]	Marg. [h]	Equipments filling rate [%]
TS213	stage 1	sodium methoxide storage tank	37,3	38,0	1,1	0,5	0,5	-	3%
RS104	stage 1	coupling reactor	10,9	8,1	7,9	13,9	10,8	2,8	67%
VS304	stage 1	coupling distillate recovery	1,9	1,8	1,2	3,3	3,3	-	63%
RS101	stage 2	hydrolysis reactor	13,2	8,9	8,2	10,3	8,1	1,3	66%
VS311	stage 2	aqueous layer intermediate storage	11,4	10,8	4,8	1,8	1,3	-	42%
TS214	stage 2	organic layer intermediate storage	84,4	81,1	4,2	5,3	5,3	-	7%
VS301	stage 2	hydrolysis receiver	1,9	1,8	0,2	8,1	8,1	-	11%
RS103	stage 3	precipitation reactor	11,4	8,7	8,1	3,8	3,8	-	45%
VS312	stage 3	centrifuge feed tank	18,9	18,0	8,1	5,8	5,0	0,8	27%
TS208	stage 3	mother liquors hold tank "A"	15,1	14,4	3,5	7,5	7,5	-	23%
TS209	stage 3	washing liquors hold tank "B"	15,1	14,4	3,2	7,0	7,0	-	21%
CF5701	stage 3	centrifuge	-	-	-	5,8	5,7	1,2	---
DF100	stage 3	dryer	-	-	-	19,8	19,8	-	---
TS302	stage 4	crude water storage tank	70,7	71,9	7,8	30,0	30,0	-	16%
IS-4302	stage 4	water recovery	-	-	-	12,0	12,0	-	---
TS217	stage 4	recycled water storage tank	45,4	43,2	8,2	38,0	38,0	-	14%
TS214	stage 5	organic recovery hold tank	84,4	81,1	10,3	48,0	48,0	-	18%
RS105	stage 5	toluene recovery pot	13,1	12,1	10,3	10,0	10,0	-	68%
TS218	stage 5	recovered toluene storage	48,4	43,2	9,4	38,0	38,0	-	21%

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	Clas : RP/IND/DAP/333/2002/0002/DS	
	Sender : STEPHAN D., PARDIGON O., BERROD G., HERNO B.	
	Date : 19/12/2001	Page : 36/69

7.2 Diagrams

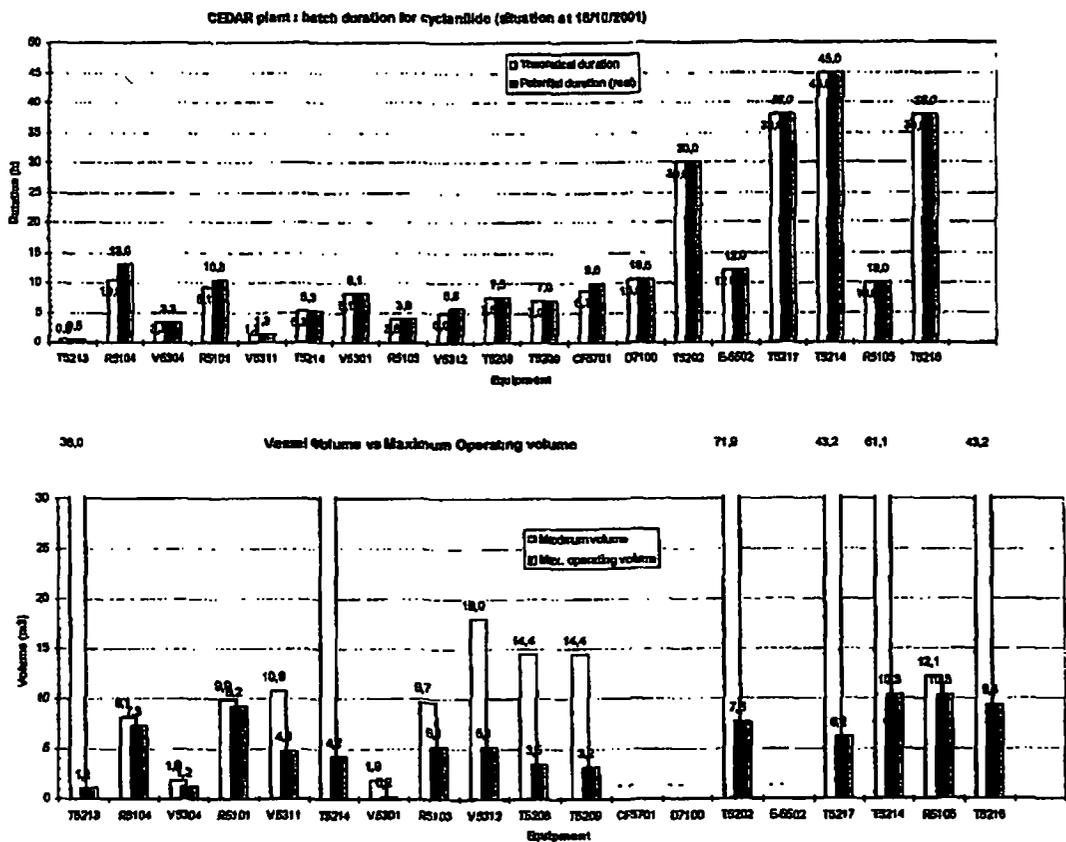


Figure 10: residence times and maximum volume for the apparatus

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	Date : 19/12/2001	Page : 37/69

7.3 Conclusion

Cyclanilide monthly production efficiency in CEDAR West-Helena facilities can reach 140 kbs/month (84 T/month) assuming a reliability rate of 100% and a cyclanilide yield = 85.0%, or 119 kbs/month (54 T/month) assuming a reliability rate of 85% (equivalent to 4.0 kbs/day or 1.8 T/day).

Bottleneck of the process is stage 1, "coupling reaction".

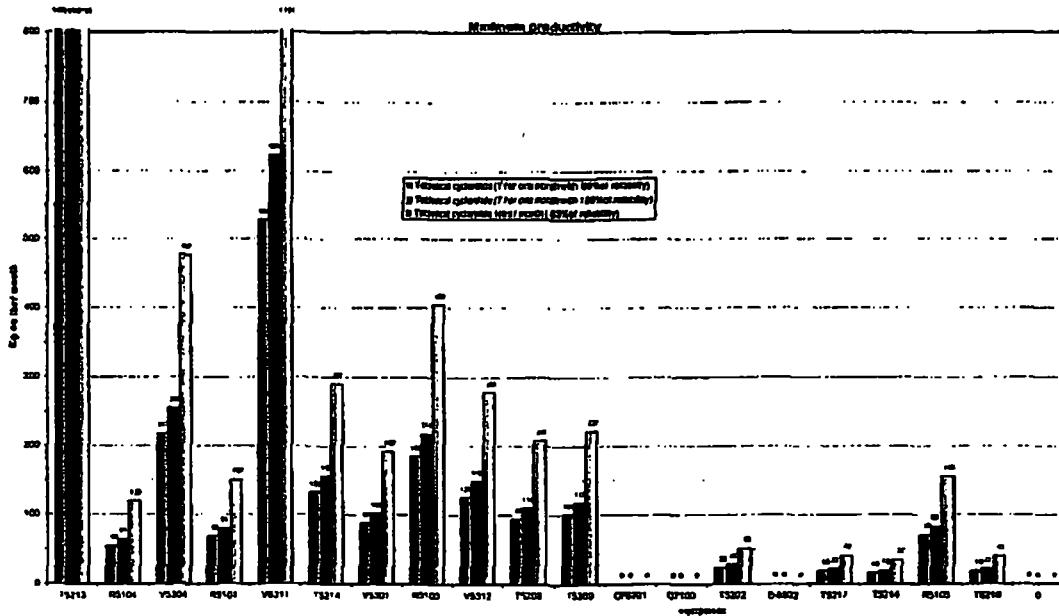


Figure 11: monthly and yearly production efficiency assuming various reliability rates

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in CEDAR West-Helena facilities, Arkansas, USA	Sender : STEPHAN D., PARDIGON O., BERROD G., HERNO B.	
	Date : 19/12/2001	Page : 38/89

8 APPENDIX III: CHEMICAL REACTION DATA

8.1 Summary table for main results

Data (mass, volume, analytical results) were collected for each batch. These data and those computed thereafter from the previous one were summarised in Table 9. Some trends were drawn from these values, see Figure 12: trends for the chemistry selectivity parameters concerning stage 1, page 39 for stage 1 and Figure 13: trends for the chemistry selectivity parameters concerning stage 2, page 40 for stage 2.

Table 9: summary of the main figures for chemistry understanding purpose

Batch number	DCA conversion (balance)	DCA conversion (sample)	DCA conversion (mean value)	Ester measured yield	Ester conversion	Cyclanilide measured yield	Wet cake	Cyclanilide A.I. yield	MeONa dosing period	MeOH distillation period	distillation time
02	84,8%	84,8%	84,8%	72,1%	100,0%	72,1%	74,0%	73,1%	2:30	3:00	8:00
03	87,0%	87,8%	87,4%	76,3%	88,5%	74,8%	78,8%	77,1%	0:50	3:55	4:45
04	88,8%	88,8%	87,7%	78,6%	88,8%	78,6%	68,7%	77,1%	1:00	3:40	4:40
05	97,1%	97,8%	97,5%	82,6%	88,2%	81,8%	71,8%	71,0%	1:30	3:30	5:00
06	87,3%	88,6%	88,0%	80,0%	100,0%	80,0%	65,8%	65,0%	1:30	3:20	4:50
07	97,1%	97,3%	97,2%	84,1%	100,0%	84,1%	98,1%	93,1%	2:00	1:30	3:30
08	82,1%	87,6%	88,0%	85,4%	100,0%	85,4%	94,4%	83,8%	1:50	2:05	3:55
09	88,7%	88,3%	87,5%	82,2%	100,0%	82,2%	78,1%	72,4%	1:45	2:10	3:55
10	88,8%	88,4%	84,6%	85,7%	88,8%	85,8%	65,8%	82,7%	1:40	2:05	3:45
11	85,2%	88,9%	88,0%	85,5%	100,0%	85,5%	85,5%	68,7%	1:35	2:10	4:25

CYCLANILIDE RPA90946
CYCLANILIDE PROCESS COMMISSIONING
 in CEDAR West-Helena facilities, Arkansas, USA

N° : 1.0 Rev. : 1.0
 Clast : RP/IND/DAP/333/2002/0002/DS
 Sender : STEPHAN D., PARDIGON O., BERROD G., HERNIO B.
 Date : 19/12/2001 Page : 39/89

8.2 Diagrams and trends

8.2.1 Stage 1, coupling reaction

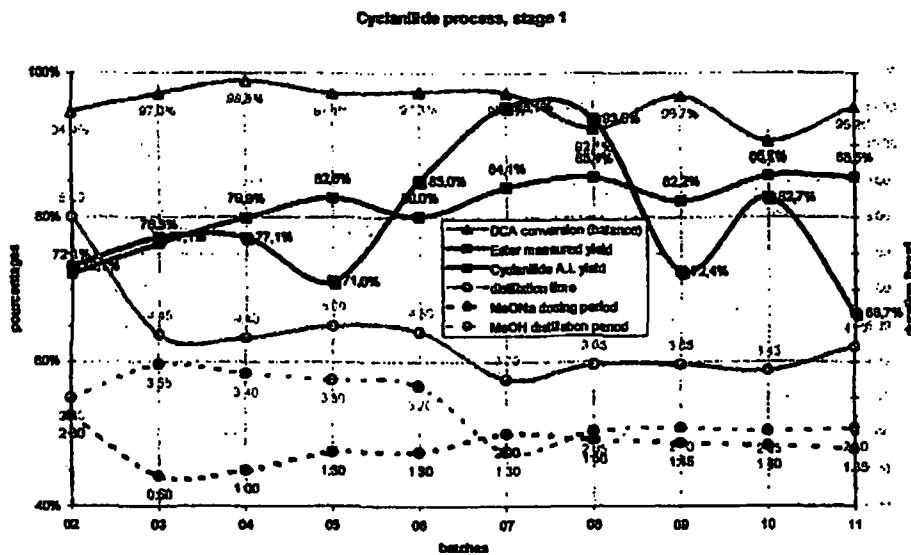
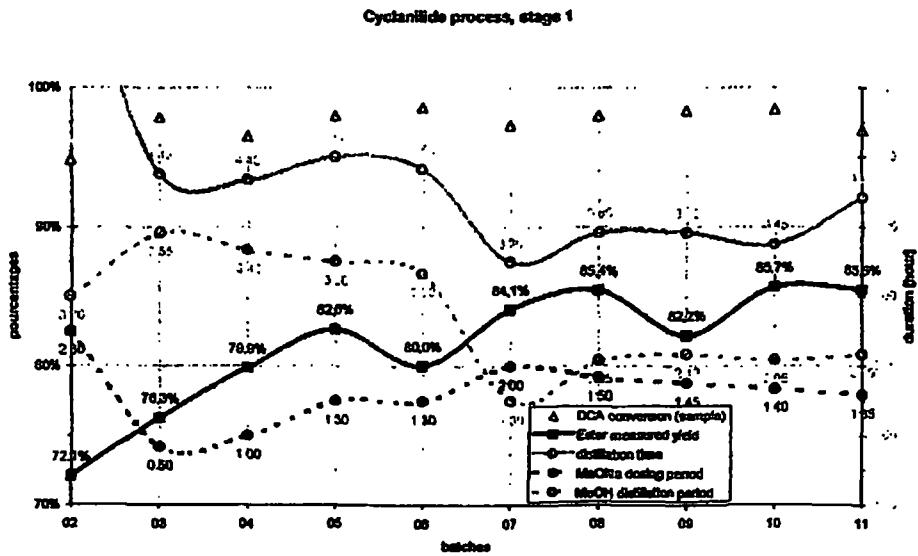


Figure 12: trends for the chemistry selectivity parameters concerning stage 1

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in CEDAR West-Helena' facilities, Arkansas, USA	Sender : STEPHAN D., PARDIGON O., BERROD G., HERNO B.	
	Date : 19/12/2001	Page : 40/69

8.2.2 Stage 2, hydrolysis reaction

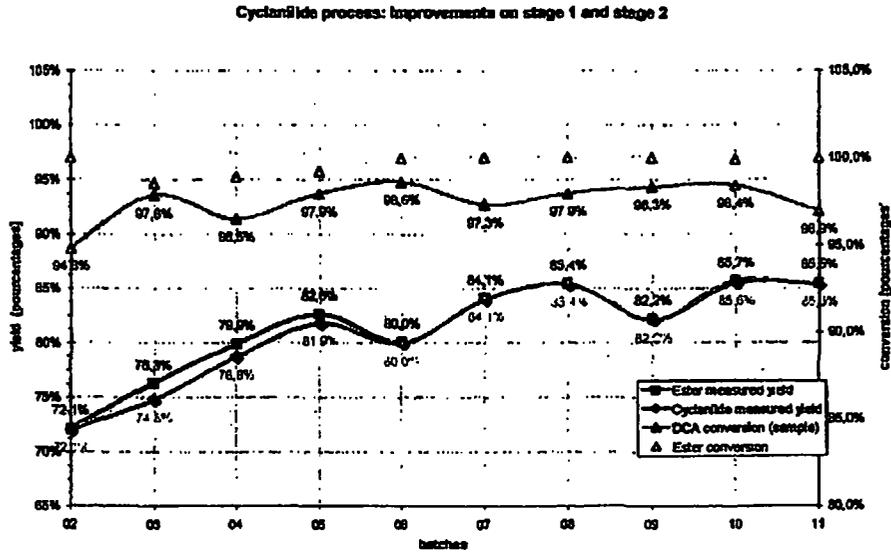


Figure 13: trends for the chemistry selectivity parameters concerning stage 2



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	Date : 19/12/2001	Page : 41/69

9 APPENDIX IV: PROCESS DATA

9.1 Summary table for the main figures

Data (mass, volume, analytical results) were collected in Table 10 for each batch. Some trends were drawn from these values, see Figure 14: trends for the process parameters concerning stage 1, page 42 for stage 1 and Figure 15: trends for the process parameters concerning stage 2, page 43 for stage 2.

Table 10: summary of the main figures for process

Batch number	DCA loaded per batch	CPOM loaded per batch	xylene loaded per batch	Dehydration distillate mass [lbs]	xylene make up per batch	Coupling distillate mass [lbs]	Mass of water	Mass of water loaded into RA	Hydrolysis distillate mass [lbs]	Aqueous layer mass [lbs]	Organic layer mass [lbs]
02	1 784	1 783	8 000	2 010	1 010	1 730	6 350	2 450	1 480	11 610	7 190
03	1 784	1 782	8 000	331	-	1 788	6 350	2 450	1 425	12 060	6 600
04	1 783	1 782	8 000	951	-	1 850	6 350	2 450	1 170	11 380	5 590
05	1 787	1 785	8 000	660	-	1 712	6 350	2 450	1 015	11 280	8 740
06	1 784	1 780	8 000	1 743	740	1 743	6 350	2 450	1 400	11 750	7 450
07	1 770	1 783	8 038	1 160	160	1 838	6 350	2 450	730	11 720	6 820
08	1 763	1 748	8 000	970	-	1 859	6 350	2 450	980	11 780	8 680
09	1 672	1 770	8 000	1 362	362	1 755	6 350	2 450	2 275	10 360	6 390
10	1 743	1 788	8 080	780	-	1 840	6 350	2 450	1 420	11 450	8 750
11	1 763	1 780	8 000	1 450	450	2 250	6 350	2 450	1 780	11 280	6 500

mean	1 763	1 758	8 004	1 142	272	1 837	6 350	2 450	1 386	11 484	6 901
st. dev	80	10	11	511	363	155	-	-	448	474	819

Batch number	formic acids mass [lbs]	estimated mass for aqueous layer	Wet cyclanilide mass [lbs]	Mothers liquors	Washed liquors	Dry cyclanilide mass [lbs]	Cyclanilide Assay [%]	To aqueous recovery	To organic recovery	Waste effluent to burn
02	900	12 710	2 440	12 488	4 607	2 198	98,7%	18 273	9 200	3 210
03	972	13 032	2 697	12 746	4 607	2 310	99,0%	17 262	8 931	3 223
04	945	12 338	2 281	12 364	4 607	2 330	99,0%	16 871	8 641	3 028
05	943	12 203	2 387	11 948	4 607	2 132	98,0%	16 468	8 400	2 727
06	949	12 888	2 816	12 332	4 607	2 647	98,7%	16 838	9 193	3 133
07	1 000	12 720	3 357	12 225	4 607	2 660	98,0%	16 730	7 960	2 588
08	942	12 722	2 988	12 524	4 607	2 600	98,0%	17 031	7 850	2 815
09	900	11 280	2 218	11 100	4 607	2 068	99,0%	15 607	7 752	4 050
10	-	11 450	2 720	11 178	4 607	2 848	98,0%	15 423	7 630	3 483
11	-	11 280	2 220	11 038	4 607	1 898	99,0%	15 648	7 650	4 030

mean	745	12 229	2 603	11 982	4 607	2 386	99,0%	16 488	8 043	3 223
st. dev.	396	666	374	648	-	287	0,1%	648	984	500

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CYCLANILIDE PROCESS COMMISSIONING	Clas. : RP/IND/DAP/333/2002/0002/DS	
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	Date : 19/12/2001	Page : 42/69

9.2 Diagrams and trends

9.2.1 Stage 1, coupling reaction

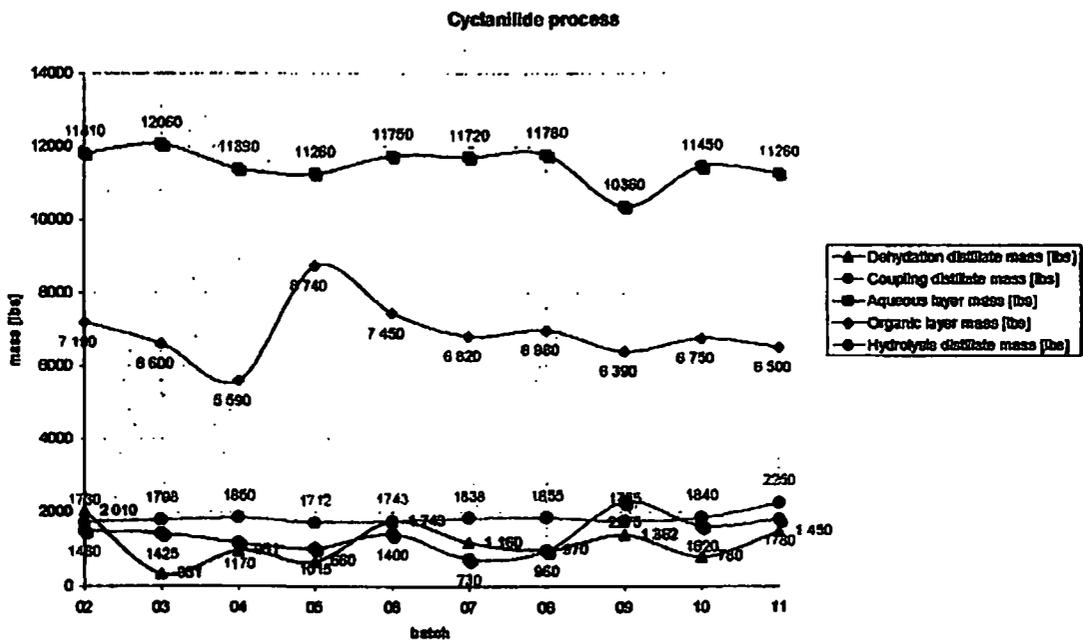


Figure 14: trends for the process parameters concerning stage 1

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	Date : 19/12/2001	Page : 43/69

9.2.2 Stage 2, hydrolysis reaction

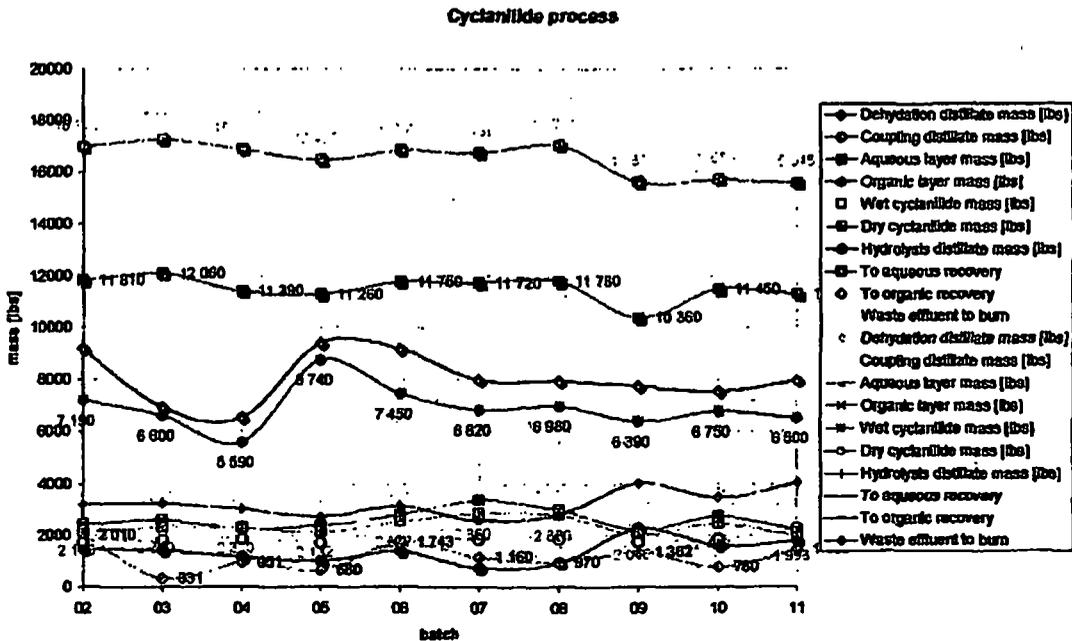


Figure 15: trends for the process parameters concerning stage 2



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	Date : 18/12/2001	Page : 44/69

10 APPENDIX V: COPIES OF SELECTED BATCH MANUFACTURING REPORT

10.1 Standard operating procedure for batch N°8

Cyclanilide Coupling Batch Sheet

Batch 008 Date 12/12/01

Verify the following:

A. Nothouse temperature 185 - 195 F

B. There are enough materials for a full charge.

C. Steam trace on R-5104 bottom head

D. Scrubber is operating at normal conditions.

E. Vacuum pump is operating properly.

Pressure Test R-5104 system OK Vacuum test R-5104 system OK

Place a pallet of melted 2,4 DCA on the scales and record the weight of the full drum. Full Pallet Wt. 274 lbs

Charge 1,763 lbs (800 kg) of 2,4 DCA to R-5104. Record the lot # of each drum. 01-57

Start Time <u>1315</u>	Finish Time <u>1300</u>	Drum Lots <u>575/41</u>	<u>575/49</u>	<u>575/40</u>	<u>213/92</u>
R4 Start Wt. <u>920</u>	End Wt. <u>1010</u>	Empty Pallet Wt. <u>274</u>	Total DCA Charge <u>1763</u> lbs		

Purge the reactor with nitrogen. Start Time 1305 Finish Time 1315

Charge 8,000 lbs (1,110 gal) of xylene to R-5104. Mix for 10 minutes then sample.

Start Time <u>1315</u>	Finish Time <u>1335</u>	Xylene Totalizer <u>1110</u> gal
R4 Start Wt. <u>1100</u>	End Wt. <u>10150</u>	Sample Time <u>1345</u>

Purge the reactor with nitrogen. Lower the pressure in R-5104 to 70 mmHg. Begin heating the reactor to distill off water. Place the column on total reflux for 15 minutes to allow column to come to equilibrium while maintaining level at 25%. Begin take-off of xylene and water until overhead temperature reaches 150-165 F. Record the readings on the attached distillation log every 15 minutes.

Cool R-5104 to 140-145 F. Start Time 1310 Finish Time 1338 Start Temp 187 Finish Temp 146

Charge 1,763 lbs (800 kg) of CPDM to R-5104. Record the lot # of each drum.

Start Time <u>1340</u>	Finish Time <u>2040</u>	Drum Lots <u>2001/64V</u>	<u>2001/83V</u>	<u>2001/87V</u>	<u>2000/648V</u>
R4 Start Wt. <u>12070</u>	End Wt. <u>17340</u>	Full Pallet Wt. <u>2001</u>	Empty Wt. <u>253</u>	Total Charge <u>1748</u>	

Mix R-5104 for 10 minutes, then sample. Sample Time 2050 %Xylene %DCA

Pull vacuum on R-5104 to a pressure of 180 mmHg. Start Time 2230 Finish Time 2200

Charge 2,220 lbs of sodium methoxide to V-5307. Start Time 2200 Finish Time 2025 V-5307 Level 40 in

Verify that the temperature in R-5104 is 135-140 F, then begin charging sodium methoxide to R-5104 at a rate of 18.5 lb/min. Start Time 2230

As the sodium methoxide is added, methanol will begin to distill. Place the column on total reflux with a level of 25% in the receiver. When the overhead temperature stabilizes at 89.5-90.0 F, begin take-off of methanol to V-5314. Adjust reflux to maintain overhead temperature at 89.5-90.0 F. Record the reading on the attached distillation log every 15 minutes.

When no more methanol is coming over, as evidenced by a constant reflux flow and 0% output on the level controller, place the pressure controller in ramp mode and adjust the setpoint to 50 mmHg. Use the vapor pressure curve and adjust the reflux flow to maintain the proper overhead temperature during the ramp. Ramp Start Time 2450

When no more methanol is coming over, as evidenced by a constant reflux flow and 0% output on the level controller, close the reflux valve. The overhead temperature will initially increase and then drop off as the remaining methanol is stripped from the column. Break vacuum with nitrogen to 760 mmHg.

Distillation Complete Time 2255

Sample the reactor to determine the reaction completion. Sample Time 0310 %Mester %DCA 52

Charge 6,350 lbs of water to R-5104. Start Time 0320 Finish Time 0340 R4 Start Wt. 10730 End Wt. 17070

Agitate for 30 minutes, the settle for 1 hour. Settle Basin Time 0415 Finish Time 0515

Transfer the batch to R-5101. Start Time 0515 Finish Time 0610

R4 Start Wt. <u>14960</u>	End Wt. <u>270</u>	R1 Start Wt. <u>0</u>	End Wt. <u>17610</u>
Transfer V-5314 back to R-5104 to flush the reactor, then transfer to the waste truck.		Start Time <u>0615</u>	Finish Time <u>0525</u>



RHONE-POULENC INDUSTRIALISATION

CYCLANILIDE RPA90946
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N° : 1.0 Rev. : 1.0
 Clast : RP/IND/DAP/333/2002/0002/DS
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 Date : 19/12/2001 Page : 45/69

Cyclanilide Coupling Batch Sheet

Time	R-5104 Weight	R-4 Steam Flow	R-5104 Temp	R-5104 Press	C-5104 Top Temp	C-5104 Press	V-4315 Level	V-4314 Level	Reflux Flow	NaOH Flow	Initials
1430	10910	NA	111.6	86	104.43	76	0	0	0	0	DS
1515	9500	NA	126.5	70	94.73	69	15.9	-0.7	35.0	0	CL
1530	8550	NA	124.2	96	131.8	70	12.0	-0.7	0	0	CL
1545	8150	NA	125.9	99	142.0	71	18.5	5.5	27.2	0	CL
1600	8020	NA	125.0	102	135.9	70	10.1	6.9	35.0	0	CL
1615	9680	NA	124.9	104	127.5	71	12.6	10.1	33.4	0	CL
1630	8690	NA	125.2	103	142.3	70	10.3	15.3	21.4	0	CL
1645	8300	NA	125.8	98	145.0	61	9.6	16.5	20.2	0	CL
1700	7200	NA	120.9	145	148.2	162	5.6	17.0	20.0	0	CL
2250	10120	0	140.8	265	73.9	200	37.2	11.6	16.0	72.0	90% DS
2300	1110	0	143.9	190	84.0	170	0	0	0	72.0	90% DS
2315	8770	NA	138.1	200	103.3	180	12.7	0	16.4	76.1	90% DS
2330	12040	NA	139.1	202	88.10	180	29.6	0	17.8	79.0	90% DS
2345	12000	NA	139.1	208	88.10	180	10.5	5.5	10.1	82	90% DS
2400	12410	NA	138.1	208	88.3	182	9.9	13.2	10.1	82	90% DS
2415	10850	NA	140.8	206	88.1	180	10.0	28.2	8.4	82	90% DS
2430	10020	NA	147.9	205	83.1	180	10.1	37.8	9.3	82	90% DS
2445	11520	NA	142.1	194	85.8	177	10.0	43.8	4.3	0	90% DS
0100	11670	NA	139.0	176	81.9	159	5	44.1	8.0	0	90% DS
0115	11070	NA	137.4	154	76.7	130	10.0	48.0	18.5	0	90% DS
0130	1150	NA	132.1	120	82.6	84	10.0	49.8	18.2	0	90% DS
0145	11400	NA	131.6	94	57.1	71	7.2	48.8	12.5	0	90% DS
0200	10910	NA	117.7	93	56.7	70	11.0	48.8	0	0	90% DS
0215	9570	NA	115.4	89	56.0	70	9.9	53.5	0	0	90% DS
0230	9240	NA	120.2	88	55.6	70	9.9	60.2	0	0	90% DS
0245	9640	NA	125.7	88	70	70	9.9	64.5	0	0	90% DS



RHONE-POULENC INDUSTRIALISATION

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 Clast. : RP/IND/DAP/333/2002/0002/DS
 Sender : STEPHAN D. PARDIGON O. BERROD G. HERNO B
 Date : 19/12/2001 Page : 46/69

Cyclanilide Hydrolysis Batch Sheet

Batch **003** Date **12-12-01**

Verify the following:

A. R-5101 empty and bottom valve closed. <input checked="" type="checkbox"/>	C. Scrubber is operating at normal conditions. <input checked="" type="checkbox"/>	brblab 17
B. Coupling batch complete and ready for transfer. <input checked="" type="checkbox"/>	D. Vacuum pump is operating properly. <input checked="" type="checkbox"/>	

Pressure Test R-5101 system OK. Vacuum test R-5101 system OK.

Transfer the batch from R-5104 to R-5101. Start R-5101 agitator.

Charge 2,450 lbs of water to R-5101.
 Start Time **0655** Finish Time **0700** R1 Start Wt. **17540** End Wt. **19990**

Purge the reactor with nitrogen. Start Time **0700** Finish Time **0710**

Slowly reduce the pressure in R-5101 to 115 mmHg. Monitor the sight glass for signs of foaming. Start Time **0710** Finish Time **0810**

Open the steam to the R-5101 jacket and begin heating to 140 F. AS the reactor heats, methanol will distill off, condense in E-5301B and collect in V-5307B. When the level in V-5307B reaches 25%, place the column on total reflux. When the temperature reaches 140 F, begin 3 hour hold period. Record the readings on the attached sheet every 15 minutes. Hold Time Start **0810**

When the hold period is complete, adjust the pressure setpoint to 100 mmHg. Begin Take-off of methanol to the Waste Organic Truck. Continue recording readings every 15 minutes. Distill Start Time **0825**

When distillation is complete, shut off reflux and break vacuum to 760 mmHg. Distill Finish Time **1030**

Shut off agitator and allow the batch to settle for 1 hour. Start Time **1035** Finish Time **1135**

Verify that there are filter elements in the filter in the transfer line to R-5103, then transfer the aqueous layer. Leave "rag" layer in R-5101.

Sample the aqueous layer during the transfer.

Start Time 1140	R1 Start Wt. 18900	R3 Start Wt. 05	Conductivity Start 670
Finish Time 1210	End Wt. 7120	End Wt. 11910	Conductivity Finish 670
Sample Time 1145	Ester% 05	DCA% .38	Cyclanilide% 81.5

Transfer the organic layer to T-5214. Sample the aqueous layer during the transfer.

Start Time 1210	R1 Start Wt. 7120	T-5214 Start Level 17.4
Finish Time 1225	End Wt. 40	End Level 23.3
Sample Time 1215	Ester% 05	DCA% 1.34

brblab
58

CYCLANILIDE RPA90946
CYCLANILIDE PROCESS COMMISSIONING
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N° : 1.0 Rev : 1.0
Clas : RP/IND/DAP/333/2002/0002/DS
Sender : STEPHAN D. PARDIGON O, BERROD G, HERNO B
Date : 19/12/2001 Page : 48/69

10.2 Standard operating procedure for batch N°10

Cyclanilide Coupling Batch Sheet

Batch 10 Date 12-15-01

Verify the following:

A. Hothouse temperature 185 - 195 F MT

B. There are enough materials for a full charge MT

C. Steam trace on R-5104 bottom head MT

D. Scrubber is operating at normal conditions. MT

E. Vacuum pump is operating properly. MT

Pressure Test R-5104 system OK Vacuum test R-5104 system OK

Place a pallet of melted 2,4 DCA on the scales and record the weight of the full drums. Full Pallet Wt. 1324 lbs

Charge 1,763 lbs (800 kg) of 2,4 DCA to R-5104. Record the lot # of each drum.

Start Time <u>1250</u>	Finish Time <u>1830</u>	Drum Lots <u>0159</u> <u>0159</u> <u>0159</u> <u>0159</u>
R4 Start Wt. <u>-680</u>	End Wt. <u>570</u>	Empty Pallet Wt. <u>n/a</u> lbs
		Total DCA Charge <u>1763</u> lbs

Purge the reactor with nitrogen. Start Time 1235 Finish Time 1840

Charge 8,000 lbs (1,110 gal) of xylene to R-5104. Mix for 10 minutes then sample.

Start Time <u>1845</u>	Finish Time <u>1900</u>	Xylene Totalizer <u>1110</u> gal
R4 Start Wt. <u>570</u>	End Wt. <u>10190</u>	Sample Time <u>n/a</u>
		%Xylene <u>n/a</u> %DCA <u>n/a</u>

Purge the reactor with nitrogen. Lower the pressure in R-5104 to 70 mmHg. Begin heating the reactor to distill off water. Place the column on total reflux for 15 minutes to allow column to come to equilibrium while maintaining level at 25%. Begin take-off of xylene and water until overhead temperature reaches 150-155 F. Record the readings on the attached distillation log every 15 minutes. Start Time 2050

Cool R-5104 to 140-145 F Start Time 2230 Finish Time 2300 Start Temp 176.1 Finish Temp 149

Charge 1,763 lbs (800 kg) of CPDM to R-5104 Record the lot # of each drum.

Start Time <u>2335</u>	Finish Time <u>2415</u>	Drum Lots <u>2006/64V</u> <u>2006/64V</u> <u>2006/64V</u> <u>2006/64V</u>
R4 Start Wt. <u>11890</u>	End Wt. <u>1380</u>	Full Pallet Wt. <u>2015</u> Empty Wt. <u>260</u> Total Charge <u>1755</u>

Mix R-5104 for 10 minutes, then sample. Sample Time 2425 %Xylene %DCA

Pull vacuum on R-5104 to a pressure of 180 mmHg. Start Time 2445 Finish Time 0110

Charge 2,220 lbs of sodium methoxide to V-5307. Start Time 2415 Finish Time 2430 V-5307 Level 40"

Verify that the temperature in R-5104 is 135-140 F, then begin charging sodium methoxide to R-5104 at a rate of 18.5 lb/min. Start Time 0105

As the sodium methoxide is added, methanol will begin to distill. Place the column on total reflux with a level of 25% in the receiver. When the overhead temperature stabilizes at 89.5-90.0 F, begin take-off of methanol to V-5314. Adjust reflux to maintain overhead temperature at 89.5-90.0 F. Record the reading on the attached distillation log every 15 minutes.

When no more methanol is coming over, as evidenced by a constant reflux flow and 0% output on the level controller, place the pressure controller in ramp mode and adjust the setpoint to 50 mmHg. Use the vapor pressure curve and adjust the reflux flow to maintain the proper overhead temperature during the ramp. Record the reading on the attached distillation log every 15 minutes. Ramp Start Time 0330

When no more methanol is coming over, as evidenced by a constant reflux flow and 0% output on the level controller, close the reflux valve. The overhead temperature will initially increase and then drop off as the remaining methanol is stripped from the column. Break vacuum with nitrogen to 760 mmHg. Distillation Complete Time 0450

Sample the reactor to determine the reaction completion. Sample Time n/a %Ester n/a %DCA n/a

Charge 6,350 lbs of water to R-5104. Start Time 0520 Finish Time 0510 R4 Start Wt. 11890 End Wt. 17340

Agitate for 30 minutes, then settle for 1 hour. Settle Start Time 0540 Finish Time 0640

Transfer the batch to R-5101. Start Time 0625 Finish Time 0710 R4 Start Wt. 15610 End Wt. 242 R1 Start Wt. 20 End Wt. 17870

Transfer V-5314 back to R-5104 to flush the reactor, then transfer to the waste truck. Start Time 0635 Finish Time 0710



RHONE-POULENC INDUSTRIALISATION

CYCLANILIDE RPA90946
 CYCLANILIDE PROCESS COMMISSIONING
 in CEDAR West-Helena facilities, Arkansas, USA

N° : 1.0 Rev. : 1.0
 Clast : RP/IND/DAP/333/2002/0002/DS
 Sender : STEPHAN O., PARDIGON O., BERROD G., HERNO B.
 Date : 19/12/2001 Page : 49/69

Cyclanilide Coupling Batch Sheet

Time	R-5104 Weight	R-4 Steam Flow	R-5104 Temp	R-5104 Press	C-5104 Top Temp	C-5104 Press	V-5315 Level	V-5314 Level	Reflux Flow	NaOMe Flow	Initials
1930	10000	NA	144.6	91	73	75	8	8	8	8	BS
1945	9120	NA	144.0	95	137	67	8	8	8	8	BS
2000	8000	NA	143	105	87.7	68	36.9	8	8.5	8	BS
2015	5770	NA	143.7	101	110	70	---	---	21.3	8	BS
2030	2610	---	176.6	601	68.10	68	12.3	8	21.2	---	BS
2100	8610	NA	176.4	105	125.5	71	10.7	10.0	23.0	---	BS
2115	8350	NA	176.4	104	140.5	71	10.5	17.1	22.7	---	BS
2130	9300	NA	177.4	104	140.5	68	17.7	28.5	22.3	---	BS
2145	8100	NA	178.0	105	151.5	71	14.3	30.5	22.8	---	BS
2200	1000	NA	176.1	102	151.4	70	11.7	32.1	20.2	---	BS
0100	10760	NA	142.6	185.204	110.2	135	-4	-7	8	32.7	BS
0130	10300	NA	136.6	207	85.4	175	18.3	-7	24.8	35.7	BS
0145	10400	NA	146.1	210	83.1	180	5.4	-7	20.1	35.7	BS
0200	10780	NA	138.0	210	81.2	181	10.0	1.0	8.0	35.7	BS
0215	10880	NA	134.6	207	85.27	180	10.0	1.0	8.0	35.7	BS
0230	11050	NA	171.0	207	85.27	181	5.9	25.3	8.2	35.7	BS
0200	10760	---	132.7	211.7	86.6	68	9.7	48.7	18.0	---	BS
0315	9890	---	137.6	121	71.5	82	9.1	47.9	18.0	---	BS
0330	10050	---	133.5	103	68	78	2	43.1	13.1	---	BS
0345	10580	---	126.4	73	53.1	88	10.2	51.1	8	---	BS
0400	10020	---	116.5	68	49.9	50	9.9	55.8	8	---	BS
0415	11010	---	114.7	68	48.4	50	10.0	52.4	10	---	BS
0430	10980	---	119.2	68	48.67	50	10.4	61.7	8	---	BS
0445	10880	---	121.8	68	71.55	50	9.7	62.5	8	---	BS
0450	10820	---	120.5	68	71.55	50	9.7	62.5	8	---	BS



RHONE-POULENC INDUSTRIALISATION

CYCLANILIDE RPA90946
CYCLANILIDE PROCESS COMMISSIONING
in CEDAR West-Helena facilities, Arkansas, USA

N° : 1.0 Rev. 1.0
Clas : RP/IND/DAP/333/2002/0002/DS
Sender : STEPHAN D., PARDIGON O., BERROD G., HERNO B.
Date : 19/12/2001 Page : 50/69

Cyclanilide Hydrolysis Batch Sheet

Batch 10 Date 12-16-01
1. Verify the following:
A. R-6101 empty and bottom valve closed. [checked]
B. Coupling batch complete and ready for transfer. [checked]
C. Scrubber is operating at normal conditions. [checked]
D. Vacuum pump is operating properly. [checked]
2. Pressure Test R-6101 system OK. [checked] Vacuum test R-6101 system OK. [checked]
3. Transfer the batch from R-5104 to R-6101. Start R-6101 agitator.
4. Charge 2,450 lbs of water to R-6101. Start Time 07:30 Finish Time 07:35 R1 Start Wt. 17580 End Wt. 20030
5. Purge the reactor with nitrogen. Start Time 07:35 Finish Time 07:45
6. Slowly reduce the pressure in R-5101 to 115 mmHg. Monitor the sight glass for signs of foaming. Start Time 07:45 Finish Time 08:25
7. Open the steam to the R-5101 jacket and begin heating to 140 F. AS the reactor heats, methanol will distill off, condense in E-6501B and collect in V-6307B. When the level in V-6307B reaches 25%, place the column on total reflux. When the temperature reaches 140 F, begin 3 hour hold period. Record the readings on the attached sheet every 15 minutes. Hold Time Start 08:30
8. When the hold period is complete, adjust the pressure setpoint to 100 mmHg. Begin Take-off of methanol to the Waste Organic Truck. Continue recording readings every 15 minutes. Distill Start Time 11:52 08:30
9. When distillation is complete, shut off reflux and break vacuum to 780 mmHg. Distill Finish Time 11:30
10. Shut off agitator and allow the batch to settle for 1 hour. Start Time 13:55 Finish Time 13:55
11. Verify that there are filter elements in the filter in the transfer line to R-6103, then transfer the aqueous layer. Leave 'rag' layer in R-6101. Sample the aqueous layer during the transfer.
Start Time 14:00 R1 Start Wt. 18100 R3 Start Wt. 0 Conductivity Start NA
Finish Time 14:30 End Wt. 6850 End Wt. 11830 Conductivity Finish NA
Sample Time 14:15 Ester% DCA% Cyclanilide%
12. Transfer the organic layer to T-6214. Sample the aqueous layer during the transfer.
Start Time 14:30 R1 Start Wt. 6850 T-6214 Start Level 19.7
Finish Time 14:45 End Wt. 100 End Level 26.8
Sample Time 14:40 Ester% DCA% Cyclanilide%

10 gal 7.15

CYCLANILIDE RPA90946 N° : 1.0 Rev. : 1.0
CYCLANILIDE PROCESS COMMISSIONING Clast. : RP/IND/DAP/333/2002/0002/DS
 in CEDAR West-Helena facilities, Arkansas, USA Sender. : STEPHAN D. PARDIGON O., BERRON G., HERNO B.
 Date : 19/12/2001 Page : 52/69

10.3 Standard operating procedure for batch N°11

Cyclanilide Coupling Batch Sheet

10.0
 13.0
 14.0

Batch 11 Date 12-16-01

Verify the following:

A. Hothouse temperature 185 - 195 F L

B. There are enough materials for a full charge. L

C. Steam trace on R-5104 bottom head L

D. Scrubber is operating at normal conditions. L

E. Vacuum pump is operating properly. L

Pressure Test R-5104 system OK L Vacuum test R-5104 system OK L

Place 4 pallet of melted 2.4 DCA on the scales and record the weight of the full drums. Full Pallet Wt. 1395 lbs

Charge 1,783 lbs (800 kg) of 2.4 DCA to R-5104. Record the lot # of each drum.

Start Time <u>0900</u>	Finish Time <u>0940</u>	Drum Lots <u>01-54</u> <u>01-54</u> <u>01-54</u> <u>Partial</u>	Total DCA Charge <u>1763</u> lbs
R4 Start Wt. <u>-520</u>	End Wt. <u>400</u>	Empty Pallet Wt. <u>N/A</u>	

Purge the reactor with nitrogen. Start Time 0940 Finish Time 0945

Charge 6,000 lbs (1,110 gal) of xylene to R-5104. Mix for 10 minutes then sample.

Start Time <u>0945</u>	Finish Time <u>0950</u>	Xylene Totalizer <u>0</u> gal	%Xylene <u>N/A</u>	%DCA <u>N/A</u>
R4 Start Wt. <u>960</u>	End Wt. <u>1080</u>	Sample Time <u>N/A</u>		

Purge the reactor with nitrogen. Lower the pressure in R-5104 to 70 mmHg. Begin heating the reactor to distill off water. Place the column on total reflux for 15 minutes to allow column to come to equilibrium while maintaining level at 25%. Begin take-off of xylene and water until overhead temperature reaches 160-165 F. Record the readings on the attached distillation log every 15 minutes. Start Time 1025

Cool R-5104 to 140-145 F. Start Time 1355 Finish Time 1435 Start Temp 177.9 Finish Temp 190.0

Charge 1,783 lbs (800 kg) of CPDM to R-5104. Record the lot # of each drum.

Start Time <u>1455</u>	Finish Time <u>1550</u>	Drum Lots <u>2001/9311</u> <u>2001/9311</u> <u>2001/9311</u> <u>2001/9311</u>	Total Charge <u>1790</u>
R4 Start Wt. <u>10300</u>	End Wt. <u>12090</u>	Full Pallet Wt. <u>2090</u> Empty Wt. <u>265</u>	

Mix R-5104 for 10 minutes, then sample. Sample Time 1600 %Xylene %DCA

Pull vacuum on R-5104 to a pressure of 180 mmHg. Start Time 1625 Finish Time 1830

Charge 2,220 lbs of sodium methoxide to V-5307. Start Time 1830 Finish Time 2010 V-5307 Level 40"

Verify that the temperature in R-5104 is 135-140 F, then begin charging sodium methoxide to R-5104 at a rate of 18.5 lbs/min. Start Time 1830

As the sodium methoxide is added, methanol will begin to distill. Place the column on total reflux with a level of 25% in the receiver. When the overhead temperature stabilizes at 89.5-90.0 F, begin take-off of methanol to V-5314. Adjust reflux to maintain overhead temperature of 89.5-90.0 F. Record the reading on the attached distillation log every 15 minutes.

When no more methanol is coming over, as evidenced by a constant reflux flow and 0% output on the level controller, place the pressure controller in ramp mode and adjust the setpoint to 50 mmHg. Use the vapor pressure curve and adjust the reflux flow to maintain the proper overhead temperature during the ramp. Record the reading on the attached distillation log every 15 minutes. Ramp Start Time 2010

When no more methanol is coming over, as evidenced by a constant reflux flow and 0% output on the level controller, close the reflux valve. The overhead temperature will initially increase and then drop off as the remaining methanol is stripped from the column. Break vacuum with nitrogen to 780 mmHg. Distillation Complete Time 2215

Sample the reactor to determine the reaction completion. Sample Time 2235 %Ester %DCA

Charge 6,380 lbs of water to R-5104. Start Time 2235 Finish Time 2445 R4 Start Wt. 10130 End Wt. 16480

Agitate for 30 minutes, the settle for 1 hour. Settle Start Time 2445 Finish Time 2430 BOTTLE START TIME 2350

Transfer the batch to R-5101. Start Time 2430 Finish Time 0105 R1 Start Wt. 0 End Wt. -960 17260

Transfer V-5314 back to R-5104 to flush the reactor, then transfer to the waste truck. Start Time 0105 Finish Time 0115

CYCLANILIDE RPA90946	N° : 10	Rev. 1.0
CYCLANILIDE PROCESS COMMISSIONING	Clasf : RP/IND/DAP/333/2002/0002/DS	
in CEDAR West-Helena' facilities, Arkansas, USA	Sender : STEPHAN D. PARDIGON O., BERROD G., HERNO B	
	Date : 19/12/2001	Page : 54/69

Cyclanilide Hydrolysis Batch Sheet

Batch 11 Date 12.16.01

Verify the following:

A. R-5101 empty and bottom valve closed. <input checked="" type="checkbox"/>	C. Scrubber is operating at normal conditions. <input checked="" type="checkbox"/>
B. Coupling batch complete and ready for transfer. <input checked="" type="checkbox"/>	D. Vacuum pump is operating properly. <input checked="" type="checkbox"/>

Pressure Test R-5101 system OK. Vacuum test R-5101 system OK.

Transfer the batch from R-5104 to R-5101. Start R-5101 agitator.

Charge 2,450 lbs of water to R-5101.
 Start Time 0105 Finish Time 0103 R1 Start Wt. 17280 End Wt. 19730

Purge the reactor with nitrogen. Start Time 0103 Finish Time 0115

Slowly reduce the pressure in R-5101 to 445 mmHg. Monitor the sight glass for signs of foaming. Start Time 0115 Finish Time 0145

Open the steam to the R-5101 jacket and begin heating to 140 F. As the reactor heats, methanol will distill off, condense in E-5301B and collect in V-5307B.

When the level in V-5307B reaches 25%, place the column on total reflux. When the temperature reaches 140 F, begin 3 hour hold period.

Record the readings on the attached sheet every 15 minutes. Hold Time Start 0150

When the hold period is complete, adjust the pressure setpoint to 100 mmHg. Begin Take-off of methanol to the Waste Organic Truck.

Continue recording readings every 15 minutes. Distill Start Time 0450

When distillation is complete, shut off reflux and break vacuum to 760 mmHg. Distill Finish Time 0515

Shut off agitator and allow the batch to settle for 1 hour. Start Time 0555 Finish Time 0700

Verify that there are filter elements in the filter in the transfer line to R-5103, then transfer the aqueous layer. Leave "rag" layer in R-5101.

Settle the aqueous layer during the transfer.

Start Time <u>0700</u>	R1 Start Wt. <u>17860</u>	R3 Start Wt. <u>0</u>	Conductivity Start <u>NA</u>
End Time <u>0720</u>	End Wt. <u>610</u>	End Wt. <u>11260</u>	Conductivity Finish <u>NA</u>
Sample Time <u>0710</u>	Estor% <u></u>	DCAS <u></u>	Cyclanilide% <u></u>

Transfer the organic layer to T-5214. Separate the aqueous layer during the transfer.

Start Time <u>0720</u>	R1 Start Wt. <u>6210</u>	T-5214 Start Level <u>25.3</u>
Finish Time <u>0740</u>	End Wt. <u>206</u>	End Level <u>37.6</u>
Sample Time <u>0730</u>	Estor% <u></u>	DCAS <u></u>
		Cyclanilide% <u></u>

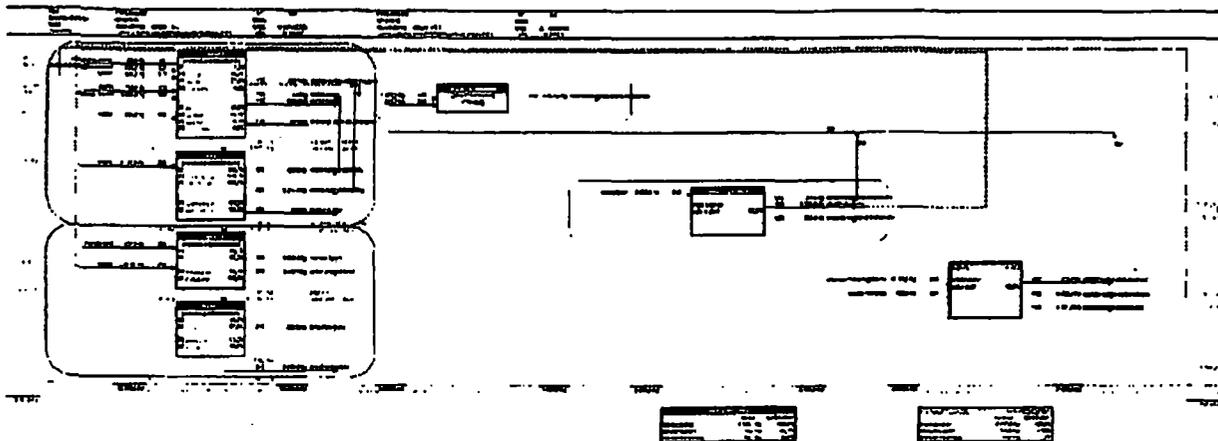
6" 10 900 L 6" 35

CYCLANILIDE RPA90946
CYCLANILIDE PROCESS COMMISSIONING
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N° : 1.0 Rev. :1.0
 Clast. : RP/IND/DAP/333/2002/0002/DS
 Sender. : STEPHAN D., PARDIGON O., BERRON G., HERRON B.
 Date : 19/12/2001 Page : 56/69

11 COHERENT MASS BALANCE

11.1 Global flow chart diagrams:





RHONE-POULENC INDUSTRIALISATION

CYCLANILIDE RPA90946
CYCLANILIDE PROCESS COMMISSIONING
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 Sender : STEPHAN D. PARDIGON O, BERROD G., HERNO B.
 Date : 19/12/2001 Page : 63/69

11.3 Stage 3 and solvent recovery balances

CYCLANILIDE RPA90946 Stage 3 - 304													CYCLANILIDE RPA90946 Stage 3 - 304													
Flow sheet - stage 304													Flow sheet - stage 304													
Date: 01/01/01													Date: 01/01/01													
Stream	Flow	Temp	Pressure	Phase	Comp	Flow	Temp	Pressure	Phase	Comp	Flow	Temp	Pressure	Phase	Comp	Flow	Temp	Pressure	Phase	Comp	Flow	Temp	Pressure	Phase	Comp	
1. Feed	1000	100	1.0	L	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
2. Recycle
3. Purge
4. Product
5. Solvent
6. Waste
7. Total

Component	Flow	Temp	Pressure	Phase	Comp	Flow	Temp	Pressure	Phase	Comp	Flow	Temp	Pressure	Phase	Comp	Flow	Temp	Pressure	Phase	Comp	Flow	Temp	Pressure	Phase	Comp	
1. Feed	1000	100	1.0	L	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
2. Recycle
3. Purge
4. Product
5. Solvent
6. Waste
7. Total

CYCLANILIDE RPA90946 Stage 3 - 304													CYCLANILIDE RPA90946 Stage 3 - 304													
Flow sheet - stage 304													Flow sheet - stage 304													
Date: 01/01/01													Date: 01/01/01													
Stream	Flow	Temp	Pressure	Phase	Comp	Flow	Temp	Pressure	Phase	Comp	Flow	Temp	Pressure	Phase	Comp	Flow	Temp	Pressure	Phase	Comp	Flow	Temp	Pressure	Phase	Comp	
1. Feed	1000	100	1.0	L	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
2. Recycle
3. Purge
4. Product
5. Solvent
6. Waste
7. Total

CYCLANILIDE RPA90946 Stage 3 - 304													CYCLANILIDE RPA90946 Stage 3 - 304													
Flow sheet - stage 304													Flow sheet - stage 304													
Date: 01/01/01													Date: 01/01/01													
Stream	Flow	Temp	Pressure	Phase	Comp	Flow	Temp	Pressure	Phase	Comp	Flow	Temp	Pressure	Phase	Comp	Flow	Temp	Pressure	Phase	Comp	Flow	Temp	Pressure	Phase	Comp	
1. Feed	1000	100	1.0	L	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
2. Recycle
3. Purge
4. Product
5. Solvent
6. Waste
7. Total



RHONE-POULENC INDUSTRIALISATION

CYCLANILIDE RPA90946
CYCLANILIDE PROCESS COMMISSIONING
in CEDAR West-Helena facilities, Arkansas, USA

N° : 1.0 Rev. :1.0
Clas : RP/IND/DAP/333/2002/0002/DS
Sender : STEPHAN D., PARDIGON O., BERROD G., HERNO B.
Date : 18/12/2001 Page : 65/69

Table with multiple columns for process flow data, including flow rates and unit specifications.

Summary table with columns for various process parameters and their values.

Table with multiple columns for process flow data, including flow rates and unit specifications.



RHONE-POULENC INDUSTRIALISATION

CYCLANILIDE RPA90946
CYCLANILIDE PROCESS COMMISSIONING
 in CEDAR West-Helena facilities, Arkansas, USA

N° : 1.0 Rev. :1.0
 Clast : RP/IND/DAP/333/2002/0002/DS
 Sender : STEPHAN O., PARDIGON O., BERROD G., HERNO B.
 Date : 19/12/2001 Page : 68/69

CYCLANILIDE		CYCLANILIDE										IF	4.0
CYCLANILIDE		CYCLANILIDE										Class	0 PARROD
CYCLANILIDE		CYCLANILIDE										Doc	0 PARROD
CYCLANILIDE		CYCLANILIDE										Date	00/00/00
Quantity	0.73												
Unit	kg												
Item	01												
Item	02												
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Item	100												



RHONE-POULENC INDUSTRIALISATION

CYCLANILIDE RPA90946
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Clas. : RP/IND/DAP/333/2002/0002/DS
Sender : STEPHAN D., PARDIGON O., BERROD G., HERNO B.
Date : 19/12/2001 Page : 69/69

12 APPENDIX VI: BIBLIOGRAPHY

1. Cyclanilide basic data, D. STEPHAN, 09/10/2000, ref. RP/IND/ACS/37B/2000/244/DS.
2. Cyclanilide process optimisation, D. STEPHAN, 06/06/2000, ref. RP/IND/ACS/37B/2000/164/DS.
3. Minutes of start-up of cyclanilide, D. STEPHAN, 22/01/2001.

Cyclanilide Produced

From: 1/2 To: 2/1

Date Entered	Date Started	Bx#	Wet Cake Used	Chunk Drs Used	Bx No Charged	No Drums	5170		Misc	
							Cyclanilide Lbs Prod	Chunk Drs Prod		
1/9/2002	12/29/2001	7811009	0	0		42	4,620	0	0	2chunk drs
1/9/2002	1/12/2002	7811010	7,276	0	22,23,24	0	0	0	0	
1/14/2002	1/12/2002	7811010	0	0		47	5,170	2,190	0	
1/14/2002	1/12/2002	7811011	5,619	2,190	25,26,28	0	0	0	0	
1/15/2002	1/12/2002	7811011	0	0		57	6,270	688	0	
1/15/2002	1/14/2002	7811012	8,800	688	29,30,31	0	0	0	0	
1/18/2002	1/14/2002	7811012	0	0		56	6,160	2,514	0	
1/18/2002	1/16/2002	7811013	6,380	2,514	17,27,32	0	0	0	0	wetcake chg 400lbs
1/21/2002	1/16/2002	7811013	0	0		70	7,700	916	0	
1/21/2002	1/19/2002	7811014	5,399	916	33,34	50	5,500	1,116	0	
1/21/2002	1/20/2002	7811015	5,952	1,116	35,36	0	0	0	0	
1/24/2002	1/20/2002	7811015	0	0		45	4,950	1,255	0	
1/24/2002	1/23/2002	7811016	6,538	1,255	37,38,&325lbs bx 04	0	0	0	0	
1/28/2002	1/23/2002	7811016	0	0		53	5,830	979	0	
1/28/2002	1/25/2002	7811017	4,742	0	62,63	29	3,190	0	0	
1/28/2002	1/27/2002	7811018	6,755	1,401	39,40&582lbs bx 04	0	0	0	0	
1/30/2002	1/27/2002	7811018	0	0		52	5,720	1,117	0	
1/30/2002	1/29/2002	7811019	7,027	1,117	41,42&582lbs bx 04	0	0	0	0	

Cyclanilide

Raw Materials Received

From 1/1

To 1/31

<i>Date</i>	<i>RR</i>	<i>Supplier</i>	<i>Shipper</i>	<i>Container</i>	<i>Item No</i>	<i>Product</i>	<i>Qty</i>	<i>Misc</i>
1/4/2002	19828	Aventis	Blackhawk	1815	1	CPDM	34,398	78drs@200kgs ea
1/14/2002	19871	Aventis	Blackhawk	1299	1	CPDM	34,398	78drs@200kgs ea
1/25/2002	19924	Aventis	Blackhawk	1816	1	CPDM	34,398	78drs@200kgs ea
Total by Item:							103,194	
1/18/2002	19897	Aventis	Wright Dist	994802	2	2, 4 DCA	35,264	64drs@250kgs ea
1/28/2002	19936	Aventis	Jacobson Transport	01652	2	2, 4 DCA	35,264	64@ 250kgs ea
Total by Item:							70,528	
1/4/2002	19827	Aventis	Chickasaw	EXFU380265-3	3	Sodium Methoxide	43,980	
1/16/2002	19883	Aventis	Boasso America Cor	ICTU240190-3	3	Sodium Methoxide	43,820	
1/26/2002	19930	Aventis	Gulf States	BVIU424045-2	3	Sodium Methoxide	43,540	
Total by Item:							131,340	
1/22/2002	19910	Russell-Stanley	Trans Carriers	6231	4	Mt 30 gal drums	495	
Total by Item:							495	
1/8/2002	19836	Cone Solvents	Cone Solvents	850	41200	Xylene	45,800	
1/25/2002	19923	Exxon Mobile	Unibulk	3920202	41200	Xylene	45,520	
Total by Item:							91,320	
1/1/2002	19810	Brenntag	Fed Ex		46240	Formic Acid	4,360	8drs@545lbs ea
1/3/2002	19822	Brenntag	Brenntag	45803	46240	Formic Acid	17,985	33drs@545lbs ea
1/11/2002	19862	Vopak	Conway Transport	4960530	46240	Formic Acid	5,250	10drs@525lbs ea
1/16/2002	19882	Brenntag	American Freightway	P13263	46240	Formic Acid	4,360	8drs@545lbs ea
1/17/2002	19890	Brenntag	Brenntag	45803	46240	Formic Acid	17,440	32@545lbs ea
1/24/2002	19916	Brenntag	Brenntag	45803	46240	Formic Acid	21,800	40drs@545lbs ea
Total by Item:							71,195	

Monday, February 04, 2002

Propanil Production by Period by Batch From 1/2 To 2/1

Started	Bx No	DCA	P Acid	P Anhy	P Tech
2/31/2001	C121218	0	4,500	0	25,340
1/2/2002	C012001	19,100	14,500	0	28,240
1/2/2002	C012002	19,100	15,895	0	25,390
1/3/2002	C012003	19,100	13,095	0	25,180
1/6/2002	C012004	19,110	8,900	0	25,350
1/6/2002	C012005	19,080	12,075	0	25,200
1/7/2002	C012006	19,100	12,820	0	26,150
1/7/2002	C012007	19,100	11,450	0	25,100
1/9/2002	C012008	19,100	12,490	0	25,580
1/10/2002	C012009	19,100	12,500	0	25,250
1/10/2002	C012010	19,100	14,815	0	25,690
1/11/2002	C012011	19,100	14,645	0	25,530
1/11/2002	C012012	19,100	15,750	0	25,530
1/12/2002	C012013	19,100	15,545	0	25,430
1/12/2002	C012014	19,100	14,860	0	25,940
1/13/2002	C012015	19,100	14,785	0	25,590
1/13/2002	C012016	19,100	14,375	0	25,410
1/14/2002	C012017	19,100	17,460	0	25,830
1/14/2002	C012018	19,100	14,115	0	25,340
1/15/2002	C012019	19,100	13,580	0	25,530
1/15/2002	C012020	19,100	11,815	0	25,490
1/16/2002	C012021	19,135	14,265	0	25,450
1/16/2002	C012022	19,100	13,470	0	25,370
1/18/2002	C012023	19,100	14,925	0	25,400
1/18/2002	C012024	19,100	14,100	0	25,160
1/19/2002	C012025	19,100	13,960	0	25,860
1/19/2002	C012026	19,100	13,435	0	25,330
1/20/2002	C012027	19,100	14,160	0	25,600
1/20/2002	C012028	19,100	13,860	0	25,920
1/21/2002	C012029	19,100	15,165	0	25,590

<i>Started</i>	<i>Bx No</i>	<i>DCA</i>	<i>P Acid</i>	<i>P Anhy</i>	<i>P Tech</i>
1/21/2002	C012030	19,100	12,725	0	25,470
1/22/2002	C012031	19,100	12,240	0	25,610
1/22/2002	C012032	19,100	14,560	0	25,460
1/23/2002	C012033	19,085	13,185	0	26,010
1/23/2002	C012034	19,100	13,890	0	25,280
1/24/2002	C012035	19,100	12,695	0	25,800
1/24/2002	C012036	19,100	11,285	0	25,020
1/25/2002	C012037	19,085	12,335	0	25,570
1/26/2002	C012038	19,100	12,030	0	24,910
1/26/2002	C012039	19,100	11,885	0	25,920
1/27/2002	C012040	19,100	11,575	0	25,610
1/27/2002	C012041	19,110	13,330	0	25,720
1/28/2002	C012042	19,100	12,050	0	25,480
1/28/2002	C012043	19,100	9,890	0	25,440
1/29/2002	C012044	19,100	13,305	0	25,480
1/31/2002	C012045	19,100	12,670	0	0
1/31/2002	C012046	19,100	14,670	0	0

Report Totals:

	878,605	621,630	0	1,148,550 ✓
	3020	40200	40300	3000

Monday, February 04, 2002

Propanil Formulated Products for the Period From 1/2 To 2/1

Date	Ex No	Type	F Tech	MO	Insp/terone	Meltrate	Ordram	49 Kmsd	59 Kmsd	Aromatic B	Armsd	Isoph/MIBK	Sum Od	Stam Bark	30 Buft	40 Buft	Flake	RiceSole	Arrowsls	66 Meltrate
1/11/2002	FL01210-01	Flake	10,500	0	0	0	0	0	0	0	0	0	0	0	0	0	10,500	0	0	0
1/14/2002	FL01210-01	Flake	28,500	0	0	0	0	0	0	0	0	0	0	0	0	0	28,500	0	0	0
1/14/2002	FL01212-01	Flake	39,000	0	0	0	0	0	0	0	0	0	0	0	0	0	39,000	0	0	0
1/15/2002	FL01214-01	Flake	9,000	0	0	0	0	0	0	0	0	0	0	0	0	0	9,000	0	0	0
1/16/2002	FL01214-01	Flake	22,500	0	0	0	0	0	0	0	0	0	0	0	0	0	22,500	0	0	0
1/16/2002	FL01215-01	Flake	7,500	0	0	0	0	0	0	0	0	0	0	0	0	0	7,500	0	0	0
1/17/2002	FL01216-01	Flake	30,000	0	0	0	0	0	0	0	0	0	0	0	0	0	30,000	0	0	0
1/17/2002	FL01216-02	Flake	9,000	0	0	0	0	0	0	0	0	0	0	0	0	0	9,000	0	0	0
1/21/2002	FL01218-01	Flake	37,500	0	0	0	0	0	0	0	0	0	0	0	0	0	37,500	0	0	0
1/21/2002	FL01219-01	Flake	21,000	0	0	0	0	0	0	0	0	0	0	0	0	0	21,000	0	0	0
1/21/2002	FL01218-02	Flake	40,500	0	0	0	0	0	0	0	0	0	0	0	0	0	40,500	0	0	0
1/21/2002	FL01220-01	Flake	8,000	0	0	0	0	0	0	0	0	0	0	0	0	0	8,000	0	0	0
1/22/2002	FL01220-01	Flake	21,000	0	0	0	0	0	0	0	0	0	0	0	0	0	21,000	0	0	0
1/22/2002	FL01221-01	Flake	33,000	0	0	0	0	0	0	0	0	0	0	0	0	0	33,000	0	0	0
1/24/2002	FL01221-01	Flake	1,500	0	0	0	0	0	0	0	0	0	0	0	0	0	1,500	0	0	0
1/24/2002	FL01223-01	Flake	42,000	0	0	0	0	0	0	0	0	0	0	0	0	0	42,000	0	0	0
1/24/2002	FL01223-02	Flake	42,000	0	0	0	0	0	0	0	0	0	0	0	0	0	42,000	0	0	0
1/24/2002	FL01223-01	Flake	19,500	0	0	0	0	0	0	0	0	0	0	0	0	0	19,500	0	0	0
1/25/2002	FL01223-01	Flake	21,000	0	0	0	0	0	0	0	0	0	0	0	0	0	21,000	0	0	0
1/25/2002	FL01224-01	Flake	21,000	0	0	0	0	0	0	0	0	0	0	0	0	0	21,000	0	0	0
1/28/2002	FL01225-01	Flake	39,000	0	0	0	0	0	0	0	0	0	0	0	0	0	39,000	0	0	0

Date	It. No	Type	P Tech	MO	Imp/Arms	Min/Inst	Ordram	48 Band	Wrt Band	Aromatic B	Armal	Isoph/MIBK	Sen Oil	Stem Ball	M Ball	48 Ball	Flite	RicoSolo	Armasin	# Meltrate
1/28/2002	FL01225-02	Flake	25,500	0	0	0	0	0	0	0	0	0	0	0	0	0	25,500	0	0	0
1/28/2002	FL01226-01	Flake	22,500	0	0	0	0	0	0	0	0	0	0	0	0	0	22,500	0	0	0
1/28/2002	FL01226-02	Flake	28,500	0	0	0	0	0	0	0	0	0	0	0	0	0	28,500	0	0	0
1/28/2002	FL01227-01	Flake	13,500	0	0	0	0	0	0	0	0	0	0	0	0	0	13,500	0	0	0
1/28/2002	FL01227-01	Flake	28,500	0	0	0	0	0	0	0	0	0	0	0	0	0	28,500	0	0	0
1/28/2002	FL01228-01	Flake	7,500	0	0	0	0	0	0	0	0	0	0	0	0	0	7,500	0	0	0
1/30/2002	FL01228-01	Flake	31,500	0	0	0	0	0	0	0	0	0	0	0	0	0	31,500	0	0	0
1/30/2002	FL01229-01	Flake	18,500	0	0	0	0	0	0	0	0	0	0	0	0	0	18,500	0	0	0
1/31/2002	FL01229-01	Flake	4,500	0	0	0	0	0	0	0	0	0	0	0	0	0	4,500	0	0	0
1/31/2002	FL01230-01	Flake	24,000	0	0	0	0	0	0	0	0	0	0	0	0	0	24,000	0	0	0
1/31/2002	FL01230-02	Flake	15,000	0	0	0	0	0	0	0	0	0	0	0	0	0	15,000	0	0	0
2/1/2002	FL01230-02	Flake	13,500	0	0	0	0	0	0	0	0	0	0	0	0	0	13,500	0	0	0
2/1/2002	FL01231-02	Flake	27,000	0	0	0	0	0	0	0	0	0	0	0	0	0	27,000	0	0	0

Sub Totals:	759,000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	759,000	0	0	0
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1/18/2002	48	42,340	31,000	7,760	0	0	0	9,880	0	0	0	0	0	0	0	10,222	0	0	0	0
1/18/2002	48	41,530	29,450	7,380	0	0	0	9,880	0	0	0	0	0	0	0	9,880	0	0	0	0
1/18/2002	48	42,330	29,450	7,380	0	0	0	9,880	0	0	0	0	0	0	0	9,880	0	0	0	0
1/18/2002	48	41,540	29,480	7,380	0	0	0	9,880	0	0	0	0	0	0	0	9,882	0	0	0	0
1/18/2002	48	24,920	17,680	5,120	0	0	0	5,820	0	0	0	0	0	0	0	9,016	0	0	0	0
1/18/2002	48	41,530	29,450	8,760	0	0	0	9,880	0	0	0	0	0	0	0	10,047	0	0	0	0
1/18/2002	48	41,530	29,450	8,820	0	0	0	9,880	0	0	0	0	0	0	0	10,056	0	0	0	0
1/18/2002	48	20,785	18,605	3,880	0	0	0	4,840	0	0	0	0	0	0	0	5,056	0	0	0	0
1/18/2002	48	41,630	29,840	7,380	0	0	0	9,880	0	0	0	0	0	0	0	9,834	0	0	0	0

	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66
	UnDrawn	48 Bond	49 Bond	Account B	Armed	Exp/Other	Sum Off	Sum Debt	30 Debt	40 Debt	Plan	Ric/Bals	Armed	48 M/Draw					
1/18/2002	48	41,000	29,450	7,200	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1/29/2002	48	16,600	6,400	2,800	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sub Totals:		57,600	35,850	10,000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals:		1,154,135	290,215	74,040	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

3000 4000 4500 41700 40000 40010 40000 40000 41000 41600 3400 3300 3300 3800 3100 3170 3100

121,923
216,440

Tuesday, February 05,

Flake Tech Packaged From 1/2 To 2/1

<i>Entered</i>	<i>Packed</i>	<i>Lot</i>	<i>3050 Flake Tech Used</i>	<i>3060 25 Kg Packaged</i>
1/11/2002	1/10/2002	FL10114-01	8,287	150
1/11/2002	1/10/2002	FL10131-01	2,758	50
1/14/2002	1/11/2002	FL10114-01	11,023	200
1/18/2002	1/14/2002	FL10114-01	7,498	138
1/18/2002	1/14/2002	FL10128-01	772	14
1/18/2002	1/15/2002	FL0111-01	10,747	195
1/18/2002	1/15/2002	FL1028-01	1,984	36
1/18/2002	1/15/2002	FL1029-01	3,252	59
1/21/2002	1/18/2002	FL0112-01	6,559	119
1/21/2002	1/18/2002	FL1115-01	1,709	31
1/22/2002	1/17/2002	FL10111-01	2,758	50
1/22/2002	1/17/2002	FL10112-01	8,287	150
1/22/2002	1/21/2002	FL10111-01	1,323	24
1/22/2002	1/21/2002	FL10118-01	3,858	70
1/22/2002	1/21/2002	FL11108-02	1,653	30
1/22/2002	1/21/2002	FL11114-01	1,433	26
1/22/2002	1/21/2002	FL11115-01	2,766	50
1/24/2002	1/22/2002	FL10115-01	2,701	49

<i>Entered</i>	<i>Packed</i>	<i>Lot</i>	<i>3050 Flake Tech Used</i>	<i>3060 25 Kg Packaged</i>
1/24/2002	1/22/2002	FL10118-01	3,197	58
1/24/2002	1/22/2002	FL10117-01	3,858	70
1/24/2002	1/22/2002	FL10118-01	551	10
1/24/2002	1/22/2002	FL11101-01	718	13
1/24/2002	1/23/2002	FL11101-01	3,913	71
1/24/2002	1/23/2002	FL11102-02	7,110	129
1/25/2002	1/24/2002	FL11102-02	3,197	58
1/25/2002	1/24/2002	FL11103-01	6,724	122
1/30/2002	1/25/2002	FL11103-01	2,758	50
1/30/2002	1/25/2002	FL11104-01	2,758	50
1/30/2002	1/28/2002	FL11101-01	6,063	110
1/30/2002	1/28/2002	FL11104-01	2,758	50
1/30/2002	1/28/2002	FL11111-01	2,758	50
1/30/2002	1/28/2002	FL11111-01	11,023	200
1/31/2002	1/30/2002	FL11111-01	993	18
1/31/2002	1/30/2002	FL11118-01	10,031	182
2/1/2002	1/31/2002		8,288	150
2/1/2002	1/31/2002	FL11111-01	2,150	39
2/1/2002	1/31/2002	FL11114-01	3,031	55
2/1/2002	1/31/2002	FL11117-01	5,842	106
2/1/2002	1/31/2002	FL11118-01	3,307	60

<i>Entered</i>	<i>Packed</i>	<i>Lot</i>	<i>3050 Flake Tech Used</i>	<i>3060 25 Kg Packaged</i>
			170,310 ✓	3,090 ✓

Corrected Production on Flake Tech in September for 236 bags that were produced in August that was never reported.

Ro-Neet Production

Tuesday, February 05, 2002

From: 1/2 To: 2/1

<i>Entered</i>	<i>Date Started</i>	<i>Batch #</i>	<i>46270 Kerosene</i>	<i>3520 Cycolate</i>	<i>46350 AU-564</i>	<i>3490 Ro-Neet Gals Prod</i>	<i>Misc</i>
1/25/2002	1/22/2002	9021001	5,500	20,288	1,211	3,600	
1/25/2002	1/22/2002	9021002	5,584	19,900	1,211	3,600	
1/25/2002	1/22/2002	9021003	5,500	19,800	1,211	3,600	
1/25/2002	1/24/2002	9021004	6,500	11,907	1,211	3,600	
1/28/2002	1/25/2002	9021005	5,744	20,085	1,211	3,600	
1/28/2002	1/27/2002	9021006	2,840	19,845	1,211	3,600	
2/1/2002	1/27/2002	9021007	5,500	19,845	1,211	3,600	
2/1/2002	1/27/2002	9021008	5,500	19,845	1,211	3,600	
2/1/2002	1/28/2002	9021009	6,500	19,845	1,211	3,600	
2/1/2002	1/29/2002	9021010	3,750	16,400	990	1,312	
2/1/2002	1/30/2002	9021011	3,750	16,400	990	1,312	
			54,878	204,038	12,879	35,024	

Ro-Neet Production

Tuesday, February 05, 2002

From: 1/2 To: 2/1

<i>Entered</i>	<i>Date Started</i>	<i>Batch #</i>	<i>46270 Kerosene</i>	<i>3520 Cycolate</i>	<i>46350 AU-564</i>	<i>3490 Ro-Neet Gals Prod</i>	<i>Misc</i>
1/25/2002	1/22/2002	9021001	5,500	20,286	1,211	3,600	
1/25/2002	1/22/2002	9021002	5,594	19,800	1,211	3,600	
1/25/2002	1/22/2002	9021003	6,500	19,800	1,211	3,600	
1/25/2002	1/24/2002	9021004	5,500	11,907	1,211	3,600	
1/28/2002	1/25/2002	9021005	5,744	20,065	1,211	3,600	
1/28/2002	1/27/2002	9021006	2,840	19,845	1,211	3,600	
2/1/2002	1/27/2002	9021007	5,500	19,845	1,211	3,600	
2/1/2002	1/27/2002	9021008	5,500	19,845	1,211	3,600	
2/1/2002	1/28/2002	9021009	5,500	19,845	1,211	3,600	
2/1/2002	1/29/2002	9021010	3,750	16,400	990	1,312	
2/1/2002	1/30/2002	9021011	3,750	16,400	990	1,312	
			54,678	204,038 \leftarrow	12,879	35,024	

Ro-Neet Packaged

Tuesday, February 05, 2002

From 1/2 To: 2/1

<i>Date Entered</i>	<i>Date Started</i>	<i>3490 Bulk Gals Used</i>	<i>Mt Jugs Used</i>	<i>3500 2x2.5 Produced</i>
1/28/2002	1/25/2002	3,600	720	720
1/29/2002	1/26/2002	3,600	720	720
1/29/2002	1/26/2002	1,770	354	354
		8,970	1,794	1,794

Monday, February 04

4# Packaged by Period From 1/2 To 2/1

		3290	3310	3320	3330	3340	3300	42000	42210	42230	42300	42550
Period Packed Lot		4# 20L	4# 55	4# 210L	4# 200L	4# 35	4# Bulk	mt 20L	mt 35	mt 35	mt 55	mt Blk 55
1/18/2002	1/3/2002 PR401203-01	0	0	0	0	220	7,700	0	0	220	0	0
1/18/2002	1/4/2002 PR401204-04	0	0	0	0	310	10,850	0	0	310	0	0
1/18/2002	1/7/2002 PR401207-01	0	0	0	0	220	7,700	0	0	220	0	0
1/18/2002	1/8/2002 PR401208-01	0	0	0	0	325	11,375	0	0	325	0	0
1/18/2002	1/9/2002 PR401209-01	0	0	0	0	325	11,375	0	0	325	0	0
1/18/2002	1/10/2002 PR401210-01	0	0	0	0	205	7,175	0	0	205	0	0
1/18/2002	1/11/2002 PR401211-01	0	0	0	0	275	9,625	0	0	275	0	0
1/18/2002	1/14/2002 PR401214-01	0	0	0	0	305	10,675	0	0	305	0	0
1/18/2002	1/15/2002 PR401215-01	0	0	0	0	190	6,650	0	0	190	0	0
1/18/2002	1/16/2002 PR401216-01	0	0	0	0	300	10,500	0	0	300	0	0
1/22/2002	1/21/2002 PR401221-01	0	0	0	0	280	10,150	0	0	280	0	0
1/24/2002	1/22/2002 PR401222-01	0	0	0	0	285	9,975	0	0	285	0	0
1/25/2002	1/25/2002 PR401225-01	0	0	0	0	184	6,440	0	0	184	0	0
Period Total :		0	0	0	0	3,434	120,180	0	0	3,434	0	0

+ 2750
ADDED
From LAST
MTH
96,250 LAST MTH
216,440

LESS 285
SHOWN LAST MTH
2750 ACTUAL
3035 INVOICED
285

Cedar Chemical - West Helena
Griffin L.L.C.
Propanil 4#EC Production
For Period Ending:

12/3/2001

Date	3000 Propanil Tech Used	40400 M.O. Used	40500 Isophorone Used	40600 4# Emulsifier	4# Lbs Produced	4# Gals Produced
Thru 1/1/02	511,810	363,070	90,710	119,525	1,085,115	121,923
1/1/02	41,530	29,450	7,360	9,680	88,020	9,890
1/3/02	42,330	29,450	7,360	9,680	88,820	9,880
1/4/02	41,540	29,460	7,360	9,680	88,040	9,892
1/5/02	24,920	17,680	5,120	5,820	53,540	6,016
1/7/02	41,530	29,450	8,760	9,680	89,420	10,047
1/8/02	41,530	29,450	8,860	9,680	89,520	10,058
1/11/02	41,530	29,450	7,360	9,680	88,020	9,890
1/12/02	20,765	15,505	3,880	4,840	44,990	5,055
1/13/02	42,340	31,000	7,760	9,880	90,980	10,222
1/15/02	41,530	29,840	7,360	9,680	88,410	9,934
1/24/02	15,590	9,480	2,860	3,510	31,440	3,533
MTD Total	395,135	280,215	77,040	91,810	841,200	94,517
YTD Total	906,945	643,285	164,750	211,335	1,926,315	216,440
	3000	40400	40500	40600		

HAD TO ADD LAST
MTH TO INVENTORY
REVERSED SAIF - TO RICECO

reported 22,168gals
produced using griffin tech/inv @ \$4.70 per gal
84,082 gal produced
using cedar tech/inv @ \$8.50 per gal through 12/31/01

all of griffin tech has
been shown used

121,923

4# Packaging

Date	Lot#	4# Bulk Used	42230 Mt 35's Used	4# 35's Produced	
Thru 1/1/02		106,225	3,035	3,035	invoiced Griffin for 3035drs in dec.
Actual		86,250	2,750	2,750	issued credit to griffin and reinvolved RiceCo in Jan
1/3/02	PR401203-01	7,700	220	220	invoiced riceco jan, 16
1/4/02	PR401204-01	10,850	310	310	invoiced riceco jan, 18
1/7/02	PR401207-01	7,700	220	220	
1/8/02	PR401208-01	11,375	325	325	Total prod and shipped
1/9/02	PR401209-01	11,375	325	325	amount remaining to inv
1/10/02	PR401210-01	7,175	205	205	invoiced riceco for remaining amnt
1/11/02	PR401211-01	9,625	275	275	jan, 28
1/14/02	PR401214-01	10,675	305	305	
1/15/02	PR401215-01	6,650	190	190	
1/16/02	PR401216-01	10,500	300	300	
1/21/02	PR401221-01	10,150	290	290	
1/22/02	PR401222-01	9,975	285	285	
1/25/02	PR401225-01	6,440	184	184	
MTD Total		120,190	3,434	3,434	

3035 drs/106,225gals
2355 drs/82,426gals
5990
6184
794
794 drs/27,790gals
0

YTD Total	216,440	6,184	6,184
		42230	

Raw Materials Received							
Date	R/R #	Shipper	Container#	Propanil Tech	40600 4# Emulsifier	40500 Isophorone	MO
Thru 12/1/01				176,368			
Thru 1/1/02				94,798	89,940	129,120	375,863
1/2/02	19857	Celanese	GATX82089				184,459
1/2/02	19813	Stepan	3018		44960		
1/2/02	19815	Cone Solvents	1003			42,340	
1/4/02	19832	Stepan	2530		20060		
1/10/02	19842	Celanese	503698				44,200
1/10/02	19846	Celanese	1788				43,860
MTD Total				0	65,020	42,340	272,519
YTD Total				271,166	154,960	171,460	648,382
					40600	40500	

Packaging Materials Received

Date	RR#	Shipper	Carrier	Cont #	42230 Mt Blue 35's
Thru 1/1/02					4,318
1/2/02	19814	Greif Brothers	Trans Carriers	6231	480
1/2/02	19831	Greif Brothers	Trans Carriers	4391	480
1/2/02	19816	Greif Brothers	Trans Carriers	4388	480

MTD Total	1,440
YTD Total	5,758

Shipments

Date	B/L#	Ship To	Shipper	Container#	Lot#	Qty Shipped
Thur 1/1/02						2,750
1/3/02	R-01230	Blackhawk/Griffin	Blackhawk	1815	PR401203-01	110
1/4/02	R-01231	Blackhawk/Griffin	Blackhawk	7024	PR401203-01	110
1/4/02	R-01232	Blackhawk/Griffin	Blackhawk	1816	PR401204-01	110
1/4/02	R-01233	Blackhawk/Griffin	Blackhawk	7310	PR401204-01	110
1/7/02	R-01234	Blackhawk/Griffin	Blackhawk	7299	PR401205-01	90
"	"	"	"	"	PR401207-01	20
1/7/02	R-01235	Blackhawk/Griffin	Blackhawk	7310	PR401207-01	110
1/8/02	R-01236	Blackhawk/Griffin	Blackhawk	1816	PR401208-01	15
"	"	"	"	"	PR401207-01	95
1/8/02	R-01237	Blackhawk/Griffin	Blackhawk	7299	PR401208-01	110
1/8/02	R-01238	Blackhawk/Griffin	Blackhawk	1816	PR401208-01	110
1/9/02	R-01239	Blackhawk/Griffin	Blackhawk	1815	PR401209-01	25

"	"	"	"	"	PR401208-01	85
1/9/02	R-01240	Blackhawk/Griffin	Blackhawk	1816	PR401209-01	110
1/9/02	R-01241	Blackhawk/Griffin	Blackhawk	7299	PR401209-01	110
1/10/02	R-01242	Blackhawk/Griffin	Blackhawk	7031	PR401209-01	80
"	"	"	"	"	PR401210-01	30
1/10/02	R-01243	Blackhawk/Griffin	Blackhawk	1816	PR401210-01	110
1/11/02	R-01244	Blackhawk/Griffin	Blackhawk	1815	PR401210-01	65
"	"	"	"	"	PR401211-01	45
1/11/02	R-01245	Blackhawk/Griffin	Blackhawk	1816	PR401211-01	110
1/11/02	R-01246	Blackhawk/Griffin	Blackhawk	7299	PR401211-01	110
1/14/02	R-01247	Blackhawk/Griffin	Blackhawk	1816	PR401214-01	100
"	"	"	"	"	PR401211-01	10
1/14/02	R-01218	Blackhawk/Griffin	Blackhawk	1815	PR401214-01	110
1/15/02	R-01252	Blackhawk/Griffin	Blackhawk	7299	PR401215-01	15
"	"	"	"	"	PR401214-01	95
1/15/02	R-01253	Blackhawk/Griffin	Blackhawk	1816	PR401215-01	110
1/16/02	R-01254	Blackhawk/RiceC	Blackhawk	7021	PR401215-01	65
"	"	"	"	"	PR401216-01	45
1/16/02	R-01255	Blackhawk/RiceC	Blackhawk	1815	PR401216-01	110
1/16/02	R-01256	Blackhawk/RiceC	Blackhawk	7310	PR401216-01	110
1/21/02	R-01257	Blackhawk/RiceC	Blackhawk	7299	PR401216-01	35
"	"	"	"	"	PR401221-01	75
1/21/02	R-01258	Blackhawk/RiceC	Blackhawk	1815	PR401221-01	110
1/22/02	R-01259	Blackhawk/RiceC	Blackhawk	7310	PR401221-01	105
"	"	"	"	"	PR401222-01	5
1/22/02	R-01260	Blackhawk/RiceC	Blackhawk	1815	PR401222-01	110
1/22/02	R-01261	Blackhawk/RiceC	Blackhawk	1816	PR401222-01	110
1/25/02	R-01262	Blackhawk/RiceC	Blackhawk	1815	PR401222-01	60
"	"	"	"	"	PR401225-01	50
1/25/02	R-01273	Blackhawk/RiceC	Blackhawk	1816	PR401225-01	134

					Gals
MTD Total Shipped				3,434	120,190
YTD Total Shipped				6,184	216,440
Total Packaged for month				3,434	120,190
Amnt Remaining				0	

Invoiced riceco for *1ST OF JAN*
 106225gals in dec(3035drs)
 82,425gals in jan(2355drs)

**Propanil
Transfers In**

From: 1/2 To 2/1

<i>Date</i>	<i>RR#</i>	<i>Shipper</i>	<i>Carrier</i>	<i>Cont#</i>	<i>Item #</i>	<i>Product</i>	<i>Qty</i>
1/8/2002	19837	Blackhawk	Blackhawk	7031	3050	Propanil Tech	39,000
1/15/2002	19877	Blackhawk	Blackhawk	7021	3050	Propanil Tech	39,000
1/21/2002	19907	Blackhawk	Blackhawk	8542	3050	Propanil Tech	39,000
1/25/2002	19927	Blackhawk	Blackhawk	8541	3050	Propanil Tech	39,000
						Total by item:	156,000 ✓
1/2/2002	19820	Platte Chemcial	Trans Carriers	6246	3500	Ro-Neet 2x2.5	16
						Total by item:	16 ✓
1/2/2002	19820	Platte Chemcial	Trans Carriers	6246	3520	Cycloate Tech 200kg	1
1/10/2002	19844	Gilscot	Horizon	CPSU108327-6	3520	Cycloate Tech 200kg	76
1/11/2002	19849	Gilscot	Horizon	MLU953997-7	3520	Cycloate Tech 200kg	76
1/12/2002	19850	Gilscot	Horizon	FMGU205237-2	3520	Cycloate Tech 200kg	76
1/14/2002	19869	Gilscot	Horizon	TRIU37466-1	3520	Cycloate Tech 200kg	76
1/28/2002	19940	Blackhawk	Blackhawk	1815	3520	Cycloate Tech 200kg	77
1/28/2002	19939	Blackhawk	Blackhawk	1816	3520	Cycloate Tech 200kg	80
						Total by item:	482 ✓
1/2/2002	19820	Platte Chemcial	Trans Carriers	6246	41780	Sponto 221 ER	350
						Total by item:	350 ✓
1/2/2002	19820	Platte Chemcial	Trans Carriers	6246	46270	Kerosene	2,130
						Total by item:	2,130 ✓

Tuesday, February 05, 2002

Propanil Shipments **From 1/1** **To 1/31**

<i>Date</i>	<i>B/L</i>	<i>Ship To</i>	<i>Shipper</i>	<i>Container</i>	<i>Item No</i>	<i>Name</i>	<i>Lot No</i>	<i>Qty</i>	<i>Misc</i>
1/25/2002	4-22283	Frontier Moving & Stora	Trans Carriers	6153	3500	Ro-Neet 2x2.5		720	Order#50136 rel# 1
1/28/2002	4-22290	Frontier Moving & Stora	Trans Carriers	6156	3500	Ro-Neet 2x2.5		720	Order#50136 rel#2
								Total by Ship To:	1,440 ✓
1/31/2002	4-22292	Blackhawk	Blackhawk	7021	3500	Ro-Neet 2x2.5		324	Order#50134
								Total by Ship To:	324 ✓
								Total by Item:	1,764
1/21/2002	4-22284	West Central/Cedar Ch	Superior	1025	3490	Ro-Neet Bulk Gals	R001221-02	4,964	Order#50138
								Total by Ship To:	4,964 ✓
								Total by Item:	4,964

<i>Date</i>	<i>B/L</i>	<i>Ship To</i>	<i>Shipper</i>	<i>Container</i>	<i>Item No</i>	<i>Name</i>	<i>Lot No</i>	<i>Qty</i>	<i>Misc</i>
1/3/2002	R-01230	Blackhawk/RiceCo	Blackhawk	1815	3340	4# 35's	PR401203-01	110	
1/4/2002	R-01231	Blackhawk/RiceCo	Blackhawk	7024	3340	4# 35's	PR401203-01	110	
1/4/2002	R-01232	Blackhawk/RiceCo	Blackhawk	1816	3340	4# 35's	PR401204-01	110	
1/4/2002	R-01233	Blackhawk/RiceCo	Blackhawk	7310	3340	4# 35's	PR401204-01	110	
1/7/2002	R-01234	Blackhawk/RiceCo	Blackhawk	7299	3340	4# 35's	PR401207-01	20	
1/7/2002	R-01234	Blackhawk/RiceCo	Blackhawk	7299	3340	4# 35's	PR401205-01	90	
1/7/2002	R-01235	Blackhawk/RiceCo	Blackhawk	7310	3340	4# 35's	PR401207-01	110	
1/8/2002	R-01236	Blackhawk/RiceCo	Blackhawk	1816	3340	4# 35's	PR401208-01	15	
1/8/2002	R-01236	Blackhawk/RiceCo	Blackhawk	1816	3340	4# 35's	PR401207-01	95	
1/8/2002	R-01237	Blackhawk/RiceCo	Blackhawk	7299	3340	4# 35's	PR401208-01	110	
1/8/2002	R-01238	Blackhawk/RiceCo	Blackhawk	1816	3340	4# 35's	PR401208-01	110	
1/9/2002	R-01239	Blackhawk/RiceCo	Blackhawk	1815	3340	4# 35's	PR401208-01	85	
1/9/2002	R-01239	Blackhawk/RiceCo	Blackhawk	1815	3340	4# 35's	PR401209-01	25	
1/9/2002	R-01240	Blackhawk/RiceCo	Blackhawk	1816	3340	4# 35's	PR401209-01	110	
1/9/2002	R-01241	Blackhawk/RiceCo	Blackhawk	7299	3340	4# 35's	PR401209-01	110	
1/10/2002	R-01242	Blackhawk/RiceCo	Blackhawk	7031	3340	4# 35's	PR401210-01	30	
1/10/2002	R-01242	Blackhawk/RiceCo	Blackhawk	7031	3340	4# 35's	PR401209-01	80	
1/10/2002	R-01243	Blackhawk/RiceCo	Blackhawk	1816	3340	4# 35's	PR401210-01	110	
1/11/2002	R-01244	Blackhawk/RiceCo	Blackhawk	1815	3340	4# 35's	PR401210-01	65	
1/11/2002	R-01244	Blackhawk/RiceCo	Blackhawk	1815	3340	4# 35's	PR401211-01	45	
1/11/2002	R-01245	Blackhawk/RiceCo	Blackhawk	1816	3340	4# 35's	PR401211-01	110	
1/11/2002	R-01246	Blackhawk/RiceCo	Blackhawk	7299	3340	4# 35's	PR401211-01	110	
1/14/2002	R-01247	Blackhawk/RiceCo	Blackhawk	1816	3340	4# 35's	PR401211-01	10	
1/14/2002	R-01247	Blackhawk/RiceCo	Blackhawk	1816	3340	4# 35's	PR401214-01	100	
1/14/2002	R-01248	Blackhawk/RiceCo	Blackhawk	1815	3340	4# 35's	PR401214-01	110	
1/15/2002	R-01252	Blackhawk/RiceCo	Blackhawk	7299	3340	4# 35's	PR401214-01	95	
1/15/2002	R-01252	Blackhawk/RiceCo	Blackhawk	7299	3340	4# 35's	PR401215-01	15	

<i>Date</i>	<i>B/L</i>	<i>Ship To</i>	<i>Shipper</i>	<i>Container</i>	<i>Item No</i>	<i>Name</i>	<i>Lot No</i>	<i>Qty</i>	<i>Misc</i>
1/15/2002	R-01253	Blackhawk/RiceCo	Blackhawk	1816	3340	4# 35's	PR401215-01	110	
1/16/2002	R-01254	Blackhawk/RiceCo	Blackhawk	7021	3340	4# 35's	PR401215-01	65	
1/16/2002	R-01254	Blackhawk/RiceCo	Blackhawk	7021	3340	4# 35's	PR401216-01	45	
1/16/2002	R-01255	Blackhawk/RiceCo	Blackhawk	1815	3340	4# 35's	PR401216-01	110	
1/16/2002	R-01256	Blackhawk/RiceCo	Blackhawk	7310	3340	4# 35's	PR401216-01	110	
1/21/2002	R-01257	Blackhawk/RiceCo	Blackhawk	7299	3340	4# 35's	PR401216-02	35	
1/21/2002	R-01257	Blackhawk/RiceCo	Blackhawk	7299	3340	4# 35's	PR401221-01	75	
1/21/2002	R-01258	Blackhawk/RiceCo	Blackhawk	1815	3340	4# 35's	PR401221-01	110	
1/22/2002	R-01259	Blackhawk/RiceCo	Blackhawk	7310	3340	4# 35's	PR401221-01	105	
1/22/2002	R-01259	Blackhawk/RiceCo	Blackhawk	7310	3340	4# 35's	PR401222-01	5	
1/22/2002	R-01260	Blackhawk/RiceCo	Blackhawk	1815	3340	4# 35's	PR401222-01	110	
1/22/2002	R-01261	Blackhawk/RiceCo	Blackhawk	1816	3340	4# 35's	PR401222-01	110	
1/25/2002	R-01262	Blackhawk/RiceCo	Blackhawk	1815	3340	4# 35's	PR401225-01	50	
1/25/2002	R-01262	Blackhawk/RiceCo	Blackhawk	1815	3340	4# 35's	PR401222-01	60	
1/25/2002	R-01273	Blackhawk/RiceCo	Blackhawk	1816	3340	4# 35's	PR401225-01	134	

Total by Ship To: 3,434

Total by Item: 3,434 ✓

Flake Tech 25kg 760

Total by Ship To: 760 ✓

Flake Tech 25kg 760 Order#50187 rel#1

Flake Tech 25kg 760 Order#50187 rel#2

Flake Tech 25kg 760 Order#50187 rel#3

Total by Ship To: 2,280 ✓

Total by Item: 3,040

1/18/2002	R-01263	Fedderson/Gilscot	Horizon	TTNU553052-6	3060				
1/31/2002	4-22327	Blackhawk/RiceCo	Blackhawk	8541	3060				
1/31/2002	4-22328	Blackhawk/RiceCo	Blackhawk	7031	3060				
1/31/2002	4-22329	Blackhawk/RiceCo	Blackhawk		3060				

<i>Date</i>	<i>R/L</i>	<i>Ship To</i>	<i>Shipper</i>	<i>Container</i>	<i>tem No</i>	<i>Name</i>	<i>Lot No</i>	<i>Qty</i>	<i>Misc</i>
1/14/2002	4-22218	Odom/Pachuta	Trans Carriers	4322	3050	Flake Tech	FL01210-01	39,000	Order#50107 rel#1
1/14/2002	4-22219	Odom/Pachuta	Trans Carriers	6246	3050	Flake Tech	FL01217-01	39,000	Order#50107 rel#2
1/16/2002	4-22220	Odom/Pachuta	Trans Carriers	6229	3050	Flake Tech	FL01215-01	7,500	Order#50107 rel#3
1/16/2002	4-22220	Odom/Pachuta	Trans Carriers	6229	3050	Flake Tech	FL01214-01	31,500	Order#50107 rel#3
1/17/2002	4-22221	Odom/Pachuta	Trans Carriers	4391	3050	Flake Tech	FL01216-01	30,000	Order#50107 rel#4
1/17/2002	4-22221	Odom/Pachuta	Trans Carriers	4391	3050	Flake Tech	FL01216-02	9,000	Order#50107 rel#4
1/21/2002	4-22222	Odom/Pachuta	Trans Carriers	4325	3050	Flake Tech		39,000	Order# 50107 rel#5
1/21/2002	4-22223	Odom/Pachuta	Trans Carriers	6176	3050	Flake Tech		39,000	Order#50107 rel#6
1/21/2002	4-22224	Odom/Pachuta	Trans Carriers	6274	3050	Flake Tech		39,000	Order#50107 rel#7
1/22/2002	4-22289	Odom/Pachuta	Trans Carriers	6125	3050	Flake Tech	FL01221-01	30,000	Order# 50146
1/22/2002	4-22289	Odom/Pachuta	Trans Carriers	6125	3050	Flake Tech	FI01220-01	9,000	Order# 50146

Total by Ship To:

312,000 ✓

<i>Date</i>	<i>B/L</i>	<i>Ship To</i>	<i>Shipper</i>	<i>Container</i>	<i>Item No</i>	<i>Name</i>	<i>Lot No</i>	<i>Qty</i>	<i>Misc</i>
1/24/2002	4-22055	Blackhawk	Blackhawk	8542	3050	Flake Tech	FL01222-01	28,500	Order# 49894 ref#3
1/24/2002	4-22055	Blackhawk	Blackhawk	8542	3050	Flake Tech	FL01222-01	7,500	Order# 49894 ref#3
1/24/2002	4-22056	Blackhawk	Blackhawk	7021	3050	Flake Tech	FL01223-01	25,500	Order#49894 ref#4
1/24/2002	4-22056	Blackhawk	Blackhawk	7021	3050	Flake Tech	FL01222-02	13,500	Order#49894 ref#4
1/25/2002	4-22057	Blackhawk	Blackhawk	8542	3050	Flake Tech	FL01222-01	34,500	Order#49894 ref#5
1/25/2002	4-22057	Blackhawk	Blackhawk	8542	3050	Flake Tech	FL01221-01	1,500	Order#49894 ref#5
1/25/2002	4-22058	Blackhawk	Blackhawk	8542	3050	Flake Tech	FL01224-01	21,000	Order#49894 ref#6
1/25/2002	4-22058	Blackhawk	Blackhawk	8542	3050	Flake Tech	FL01225-01	3,000	Order#49894 ref#6
1/25/2002	4-22058	Blackhawk	Blackhawk	8542	3050	Flake Tech	FL01223-01	15,000	Order#49894 ref#6
1/28/2002	4-22059	Blackhawk	Blackhawk	8542	3050	Flake Tech	FL01227-01	22,500	Order#49894 ref#7
1/28/2002	4-22059	Blackhawk	Blackhawk	8542	3050	Flake Tech	FL01226-01	16,500	Order#49894 ref#7
1/28/2002	4-22060	Blackhawk	Blackhawk	7021	3050	Flake Tech	FL01225-01	36,000	Order#49894 ref#8
1/28/2002	4-22060	Blackhawk	Blackhawk	7021	3050	Flake Tech	FL01225-02	3,000	Order#49894 ref#8
1/28/2002	4-22061	Blackhawk	Blackhawk	7031	3050	Flake Tech	FL01226-01	6,000	Order#49894 ref#9
1/28/2002	4-22081	Blackhawk	Blackhawk	7031	3050	Flake Tech	FL01226-02	28,500	Order#49894 ref#9
1/28/2002	4-22061	Blackhawk	Blackhawk	7031	3050	Flake Tech	FL01227-01	1,500	Order#49894 ref#9
1/29/2002	4-22062	Blackhawk	Blackhawk	7021	3050	Flake Tech	FL01221-01	3,000	Order#49894 ref#11
1/29/2002	4-22062	Blackhawk	Blackhawk	7021	3050	Flake Tech	FL01227-01	15,000	Order#49894 ref#11
1/29/2002	4-22083	Blackhawk	Blackhawk	8542	3050	Flake Tech	FL01227-01	25,500	Order#49894 ref#10
1/29/2002	4-22063	Blackhawk	Blackhawk	8542	3050	Flake Tech	FL01228-01	10,500	Order#49894 ref#10
1/31/2002	4-22311	Blackhawk	Blackhawk	8542	3050	Flake Tech	FL01229-01	10,500	Order#49894 ref#12
1/31/2002	4-22311	Blackhawk	Blackhawk	8542	3050	Flake Tech	FL01230-01	24,000	Order#49894 ref#12
1/31/2002	4-22311	Blackhawk	Blackhawk	8542	3050	Flake Tech	FL01230-02	4,500	Order#49894 ref#12

Total by Ship To:

357,000 ✓

Total by Item:

669,000

Monday, February 04, 2002

Raw Materials Received for the Period From 1/1 To 1/31

<i>Date</i>	<i>RR</i>	<i>Shipper/Vendor</i>	<i>Carrier</i>	<i>Container</i>	<i>Item No</i>	<i>Name</i>	<i>Qty</i>
1/8/2002	19835	Adjuvants	Priority	53545	48350	AU-54 Emulsifier(Ro-Neet)	14,100
Sub Total by Shipper:							14,100
Sub Total by Item:							14,100
1/11/2002	19860	Cunningham	Cunningham		48270	Kerosene	16,549
1/14/2002	19870	Cunningham	Cunningham		48270	Kerosene	16,415
1/24/2002	19918	Cunningham	Cunningham		48270	Kerosene	16,361
1/25/2002	19928	Cunningham	Cunningham		48270	Kerosene	16,201
Sub Total by Shipper:							65,526
Sub Total by Item:							65,526
1/4/2002	19115	Grief Brothers	Trans Carriers		42230	mt Drums-35 gal Plastic	480
Sub Total by Shipper:							480
1/2/2002	19814	Greif Brothers	Trans Carriers	6231	42230	mt Drums-35 gal Plastic	480
1/2/2002	19816	Greif Brothers	Trans Carriers	4388	42230	mt Drums-35 gal Plastic	480
1/4/2002	19831	Greif Brothers	Trans Carriers	4391	42230	mt Drums-35 gal Plastic	480
Sub Total by Shipper:							1,440
Sub Total by Item:							1,920
1/2/2002	19813	Stepan	Groendyke	3018	40600	Emulsifier	44,960
1/4/2002	19832	Stepan	Groendyke	2530	40600	Emulsifier	20,060
Sub Total by Shipper:							65,020
Sub Total by Item:							65,020
1/2/2002	19815	Cone Solvents	Coen Solvents	1003	40500	Isophorone	42,340
Sub Total by Shipper:							42,340
Sub Total by Item:							42,340
1/2/2002	19857	Celanese	Groendyke	GATX82089	40400	MO	184,459
1/10/2002	19846	Celanese	Groendyke	1788	40400	MO	43,860
1/10/2002	19842	Celanese	Groendyke	503698	40400	MO	44,200

<i>Date</i>	<i>RR</i>	<i>Shipper/Vendor</i>	<i>Carrier</i>	<i>Container</i>	<i>Item No</i>	<i>Name</i>	<i>Qty</i>	
							Sub Total by Shipper:	272,519
							Sub Total by Item:	272,519
1/1/2002	19809	Celanese	Groendyke	2418	40200	Propionic Acid	44,940	
1/4/2002	19829	Celanese	Groendyke	3006	40200	Propionic Acid	44,800	
1/7/2002	19834	Celanese	Groendyke	2268	40200	Propionic Acid	44,800	
1/10/2002	19843	Celanese	Groendyke	2024	40200	Propionic Acid	44,840	
1/13/2002	19865	Celanese	Groendyke	3824	40200	Propionic Acid	44,800	
1/15/2002	19876	Celanese	Groendyke	3588	40200	Propionic Acid	44,740	
1/16/2002	19885	Celanese	Groendyke	1948	40200	Propionic Acid	44,820	
1/19/2002	19894	Celanese	Groendyke	3446	40200	Propionic Acid	45,120	
1/20/2002	19902	Celanese	Groendyke	2244	40200	Propionic Acid	44,980	
1/21/2002	19904	Celanese	Groendyke	3750	40200	Propionic Acid	44,920	
1/23/2002	19913	Celanese	Groendyke	3006	40200	Propionic Acid	44,940	
1/24/2002	19922	Celanese	Groendyke	3588	40200	Propionic Acid	45,000	
1/27/2002	19932	Celanese	Groendyke	3742	40200	Propionic Acid	44,820	
1/29/2002	19942	Celanese	Groendyke	3486	40200	Propionic Acid	44,920	
							Sub Total by Shipper:	628,540
							Sub Total by Item:	628,540

#46030 Propionic Acid returned from Dupocsa 3/21/01 -120drums@ 223kgs
 ea.=26,760kgs, #46040 DCA 58drs@246kgs ea.=14,268kgs

Received kerosene in @Cedar from Cone Solvents for Cycloate-transferred to r/c#
 ACFX87825 to ship to Platte Chemical.(10,240lbs)

#46090 MO transferred in from Dupocsa 9/17/01-66drums@168.5kgs ea=11,123kgs -
 #46100 Tolueno transferred in-14drs@161kgs ea.=2,257kgs

Monday, February 04, 2002

DCA 1st Step Nitrations By Batch By Period From 1/2 To 2/1

<i>Start</i>	<i>Bx</i>	<i>41000 ODCB</i>	<i>41020 Nitric Acid</i>	<i>41010 Sulfuric Acid</i>	<i>41050 Soda Ash</i>	<i>DCNB Produced</i>
12/31/2001	DA121363	0	0	0	7	21,647
12/31/2001	DA121364	16,271	0	0	7	21,043
1/1/2002	DA012001	16,280	7,003	13,223	7	21,418
1/1/2002	DA012002	16,233	7,054	13,162	7	21,114
1/2/2002	DA012003	16,272	7,115	13,161	8	21,444
1/2/2002	DA012004	16,272	7,012	13,199	7	21,378
1/6/2002	DA012005	16,268	7,109	13,161	7	21,221
1/7/2002	DA012006	16,287	7,074	13,211	7	21,504
1/7/2002	DA012007	16,251	7,039	13,179	7	20,879
1/8/2002	DA012008	16,189	7,031	13,220	7	22,147
1/8/2002	DA012009	16,278	7,053	13,227	7	21,298
1/8/2002	DA012010	16,201	7,028	13,200	8	21,308
1/9/2002	DA012011	16,275	7,027	13,200	8	21,482
1/9/2002	DA012012	16,262	7,050	13,199	0	21,263
1/9/2002	DA012013	16,273	7,095	13,197	8	20,948
1/10/2002	DA012014	16,242	7,018	13,252	8	21,421
1/10/2002	DA012015	16,252	7,039	13,223	8	20,998
1/10/2002	DA012016	16,248	7,103	13,157	8	20,782
1/11/2002	DA012017	16,238	7,081	13,211	8	22,628
1/11/2002	DA012018	16,236	7,062	13,222	8	21,200
1/11/2002	DA012019	16,200	7,000	13,220	8	22,134
1/12/2002	DA012020	19,154	7,041	13,201	8	21,120
1/12/2002	DA012021	16,120	7,078	13,210	8	20,980
1/12/2002	DA012022	16,159	7,035	13,225	8	20,973
1/13/2002	DA012023	16,167	7,148	13,188	0	21,678
1/13/2002	DA012024	16,139	7,146	13,127	8	21,434
1/13/2002	DA012025	16,190	7,020	13,214	6	21,257
1/14/2002	DA012026	16,151	7,089	13,161	6	20,480
1/14/2002	DA012027	16,133	7,123	13,131	6	21,100
1/14/2002	DA012028	16,138	6,950	13,270	6	21,156

<i>Start</i>	<i>Bx</i>	<i>41000 ODCB</i>	<i>41020 Nitric Acid</i>	<i>41010 Sulfuric Acid</i>	<i>41050 Soda Ash</i>	<i>DCNB Produced</i>
1/15/2002	DA012029	16,239	7,073	13,148	8	21,065
1/15/2002	DA012030	16,288	7,102	13,163	8	21,100
1/15/2002	DA012031	16,270	7,047	13,208	8	20,286
1/16/2002	DA012032	16,302	7,167	13,210	8	20,760
1/16/2002	DA012033	16,285	7,085	13,190	8	21,540
1/16/2002	DA012034	16,254	7,062	13,227	6	20,980
1/17/2002	DA012035	16,276	7,065	13,164	6	21,436
1/18/2002	DA012036	16,245	7,032	13,218	8	21,523
1/19/2002	DA012037	16,263	7,074	13,187	8	21,377
1/19/2002	DA012038	16,237	7,067	13,179	8	21,214
1/19/2002	DA012039	16,210	7,082	13,163	8	20,987
1/20/2002	DA012040	16,253	7,079	13,163	8	20,975
1/20/2002	DA012041	16,235	7,051	13,190	8	20,180
1/20/2002	DA012042	16,234	7,020	13,175	8	21,057
1/21/2002	DA012043	16,236	7,103	13,179	0	21,267
1/22/2002	DA012044	16,234	7,062	13,292	8	21,697
1/22/2002	DA012045	16,277	7,122	13,123	8	20,878
1/22/2002	DA012046	19,283	7,041	13,215	6	21,597
1/22/2002	DA012047	16,280	7,090	13,200	6	21,214
1/23/2002	DA012048	16,270	7,133	13,187	6	21,331
1/23/2002	DA012049	16,260	7,099	13,197	6	21,279
1/24/2002	DA012050	16,227	7,102	13,149	6	21,392
1/24/2002	DA012051	16,186	6,982	13,197	6	21,416
1/24/2002	DA012052	16,285	7,028	13,182	6	21,241
1/25/2002	DA012053	16,280	7,106	13,155	8	20,864
1/26/2002	DA012054	16,251	7,044	13,163	6	20,410
1/26/2002	DA012055	16,269	7,091	13,198	6	21,382
1/26/2002	DA012056	16,255	7,055	13,176	8	20,874
1/27/2002	DA012057	16,208	7,018	13,212	8	20,263
1/27/2002	DA012058	16,247	7,082	13,201	8	21,047
1/27/2002	DA012059	16,263	7,058	13,196	8	20,860
1/28/2002	DA012060	16,259	7,084	13,202	8	19,130
1/29/2002	DA012061	16,245	7,100	13,205	8	20,874

<i>Start</i>	<i>Bx</i>	<i>41000 ODCB</i>	<i>41020 Nitric Acid</i>	<i>41010 Sulfuric Acid</i>	<i>41050 Soda Ash</i>	<i>DCNB Produced</i>
1/29/2002	DA012062	16,236	7,101	13,203	6	21,069
1/29/2002	DA012063	16,259	7,139	13,164	6	21,502
1/30/2002	DA012064	16,278	7,092	13,216	6	21,216
1/30/2002	DA012065	16,284	7,143	13,179	7	21,348
1/30/2002	DA012066	16,269	7,104	13,202	7	21,292
1/31/2002	DA012067	16,279	7,178	13,183	7	21,248
1/31/2002	DA012068	0	7,053	13,231	0	0
Report total		1,110,368	480,839	897,161	475	1,460,606

Monday, February 04, 2002

DCA 2nd Step Hydrogenations By Batch By Period From 1/2 To 2/1

<i>Start</i>	<i>Bx</i>	<i>DCNB Used</i>	<i>41070 Platinum Catalysyt</i>	<i>41030 Hydrogen</i>	<i>45090 50% R Caustic</i>	<i>Crude DCA Produced</i>
1/1/2002	DB012001A	10,085	1.7	279	88	8,474
1/1/2002	DB012002A	10,085	1.7	276	88	8,474
1/1/2002	DB012003A	10,085	1.7	272	88	8,474
1/1/2002	DB012004A	10,085	1.7	270	88	8,474
1/1/2002	DB012005A	10,085	1.7	262	88	8,474
1/1/2002	DB121233A	10,085	1.7	273	88	8,474
1/2/2002	DB012006A	10,085	1.7	274	88	8,474
1/2/2002	DB012007A	10,085	1.7	268	88	8,474
1/2/2002	DB012008A	10,085	1.7	265	88	8,474
1/6/2002	DB012001B	9,477	1.7	271	80	7,964
1/6/2002	DB012009A	10,085	1.7	139	88	8,474
1/6/2002	DB012010A	10,085	1.7	137	88	8,474
1/6/2002	DB012011A	10,085	1.7	133	88	8,474
1/6/2002	DB012012A	10,085	1.7	141	88	8,474
1/6/2002	DB012013A	10,085	1.7	132	88	8,474
1/7/2002	DB012002B	9,477	1.7	255	80	7,964
1/7/2002	DB012014A	10,085	1.7	202	80	8,474
1/7/2002	DB012015A	10,085	1.7	277	80	8,474
1/8/2002	DB012003B	9,477	1.7	261	80	7,467
1/8/2002	DB012004B	9,477	1.7	259	70	7,467
1/8/2002	DB012005B	9,477	1.7	259	83	7,658
1/8/2002	DB012016A	10,085	1.7	276	83	8,474
1/8/2002	DB012017A	10,085	1.7	277	80	8,474
1/8/2002	DB012018A	10,085	1.7	277	70	8,474
1/8/2002	DB012019A	10,085	1.7	275	70	8,474
1/8/2002	DB012020A	10,085	1.7	281	83	8,474
1/9/2002	DB012006B	9,477	1.7	262	83	7,658

<i>Start</i>	<i>Bx</i>	<i>DCNB Used</i>	<i>41070 Platinum Catalysyt</i>	<i>41030 Hydrogen</i>	<i>45090 50% R Caustic</i>	<i>Crude DCA Produced</i>
1/9/2002	DB012007B	9,477	1.7	265	83	7,658
1/9/2002	DB012021A	10,085	1.7	277	83	8,474
1/9/2002	DB012022A	10,085	1.7	267	83	8,474
1/9/2002	DB012023A	10,085	1.7	284	83	8,474
1/10/2002	DB012008B	9,477	1.7	272	88	7,964
1/10/2002	DB012009B	9,477	1.7	266	88	7,964
1/10/2002	DB012010B	9,477	1.7	262	88	7,964
1/10/2002	DB012024A	10,085	1.7	295	88	8,474
1/10/2002	DB012025A	10,085	1.7	172	88	8,474
1/10/2002	DB012026A	10,085	1.7	276	88	8,474
1/10/2002	DB012027A	10,085	1.7	283	88	8,474
1/11/2002	DB012011B	9,477	1.7	265	88	7,864
1/11/2002	DB012012B	9,477	1.7	260	88	7,864
1/11/2002	DB012013B	9,477	1.7	270	88	7,864
1/11/2002	DB012028A	10,085	1.7	285	88	8,474
1/11/2002	DB012029A	10,085	1.7	288	88	8,474
1/11/2002	DB012030A	10,085	1.7	279	88	8,474
1/12/2002	DB012014B	9,477	1.7	259	78	7,964
1/12/2002	DB012015B	9,477	1.8	263	78	7,964
1/12/2002	DB012016B	9,477	1.7	256	78	7,964
1/12/2002	DB012031A	10,085	1.7	280	78	8,474
1/12/2002	DB012032A	10,085	1.7	260	78	8,474
1/12/2002	DB012033A	10,085	1.7	277	78	8,474
1/12/2002	DB012037A	10,085	1.7	278	78	8,474
1/13/2002	DB012017B	9,477	1.7	260	78	7,964
1/13/2002	DB012018B	9,477	1.7	263	78	7,964
1/13/2002	DB012019B	9,477	1.7	257	78	7,964
1/13/2002	DB012034A	10,085	1.7	272	78	8,474
1/13/2002	DB012035A	10,085	1.7	282	78	8,474
1/13/2002	DB012036A	10,085	1.7	283	78	8,474
1/13/2002	DB012038A	10,085	1.7	280	78	8,474

<i>Start</i>	<i>Bx</i>	<i>DCNB Used</i>	<i>41070 Platinum Catalyst</i>	<i>41030 Hydrogen</i>	<i>45090 50% R Caustic</i>	<i>Crude DCA Produced</i>
1/14/2002	DB012020B	9,477	1.7	264	84	7,964
1/14/2002	DB012021B	9,477	1.7	267	84	7,964
1/14/2002	DB012022B	9,477	1.7	258	84	7,964
1/14/2002	DB012023B	9,477	1.7	259	84	7,964
1/14/2002	DB012039A	10,085	1.7	287	84	8,474
1/14/2002	DB012040A	10,085	1.7	294	84	8,474
1/14/2002	DB012041A	10,085	1.7	282	84	8,474
1/14/2002	DB012042A	10,085	1.7	236	84	8,474
1/15/2002	DB012024B	9,477	1.7	272	84	7,964
1/15/2002	DB012025B	9,477	1.7	259	84	7,964
1/15/2002	DB012043A	10,085	1.7	295	84	8,474
1/15/2002	DB012044A	10,085	1.7	282	84	8,474
1/16/2002	DB012026B	9,477	1.7	260	84	7,964
1/16/2002	DB012027B	9,477	1.7	289	84	7,964
1/16/2002	DB012045A	10,085	1.7	288	84	8,474
1/16/2002	DB012046A	10,085	1.7	230	84	8,474
1/17/2002	DB012028B	9,477	1.7	258	84	7,964
1/17/2002	DB012047A	10,085	1.7	285	84	8,474
1/18/2002	DB012029B	9,477	1.7	261	80	7,964
1/18/2002	DB012030B	9,477	1.7	257	80	7,964
1/18/2002	DB012048A	10,085	1.7	281	80	8,474
1/18/2002	DB012049A	10,085	1.7	279	80	8,474
1/18/2002	DB012050A	10,085	1.7	272	80	8,474
1/19/2002	DB012031B	9,477	1.7	265	84	7,964
1/19/2002	DB012032B	9,477	1.7	257	89	7,964
1/19/2002	DB012033B	9,477	1.7	258	89	7,964
1/19/2002	DB012034B	9,477	1.7	261	88	7,964
1/19/2002	DB012051A	10,085	1.7	285	84	8,474
1/19/2002	DB012052A	10,085	1.7	281	89	8,474
1/19/2002	DB012053A	10,085	1.7	283	89	8,474
1/19/2002	DB012054A	10,085	1.7	280	88	8,474

<i>Start</i>	<i>Bx</i>	<i>DCNB Used</i>	<i>41070 Platinum Catalysyt</i>	<i>41030 Hydrogen</i>	<i>45090 50% R Caustic</i>	<i>Crude DCA Produced</i>
1/20/2002	DB012035B	9,477	1.7	262	88	7,964
1/20/2002	DB012036B	9,477	1.7	262	88	7,964
1/20/2002	DB012037B	9,477	1.7	261	88	7,964
1/20/2002	DB012055A	10,085	1.7	284	88	8,474
1/20/2002	DB012056A	10,085	1.7	285	88	8,474
1/20/2002	DB012057A	10,085	1.7	286	88	8,474
1/21/2002	DB012038B	9,477	1.7	264	96	7,487
1/21/2002	DB012039B	9,477	1.7	264	88	7,964
1/21/2002	DB012058A	10,085	1.7	287	96	8,474
1/21/2002	DB012059A	10,085	1.7	282	88	8,474
1/22/2002	DB012040B	9,477	1.7	265	88	7,964
1/22/2002	DB012041B	9,477	1.7	263	88	7,964
1/22/2002	DB012060A	10,085	1.7	284	88	8,474
1/22/2002	DB012061A	10,085	1.7	286	88	8,474
1/23/2002	DB012042B	9,477	1.7	270	84	7,964
1/23/2002	DB012043B	9,477	1.7	271	84	7,964
1/23/2002	DB012062A	10,085	1.7	292	88	8,474
1/23/2002	DB012063A	10,085	1.7	292	84	8,474
1/24/2002	DB012044B	9,477	1.7	263	95	7,964
1/24/2002	DB012045B	9,477	1.7	263	84	7,964
1/24/2002	DB012064A	10,085	1.7	290	95	8,474
1/24/2002	DB012065A	10,085	3.3	286	84	8,474
1/25/2002	DB012046B	9,477	1.7	267	84	7,964
1/25/2002	DB012047B	9,477	1.7	257	84	7,964
1/25/2002	DB012048B	9,477	1.7	257	84	7,964
1/25/2002	DB012049B	9,477	1.7	258	84	7,964
1/25/2002	DB012066A	10,085	1.7	289	84	8,474
1/25/2002	DB012067A	10,085	1.7	280	84	8,474
1/25/2002	DB012068A	10,085	1.7	280	84	8,474
1/25/2002	DB012069A	10,085	1.7	280	84	8,474
1/26/2002	DB012050B	9,477	1.7	263	84	7,964

<i>Start</i>	<i>Bx</i>	<i>DCNB Used</i>	<i>41070 Platinum Catalyst</i>	<i>41030 Hydrogen</i>	<i>45090 50% R Caustic</i>	<i>Crude DCA Produced</i>
1/26/2002	DB012051B	9,477	1.7	263	84	7,964
1/26/2002	DB012052B	9,477	1.7	273	84	7,964
1/26/2002	DB012070A	10,085	1.7	284	84	8,474
1/26/2002	DB012071A	10,085	1.7	285	84	8,474
1/26/2002	DB012072A	10,085	1.8	297	84	8,474
1/27/2002	DB012053B	9,477	1.7	276	95	7,964
1/27/2002	DB012073A	10,085	1.7	300	95	8,474
1/28/2002	DB012054B	9,477	1.7	261	95	7,964
1/28/2002	DB012074A	10,085	1.7	286	95	8,474
1/29/2002	DB012055B	9,477	1.7	262	80	7,964
1/29/2002	DB012056B	9,477	1.7	266	74	7,964
1/29/2002	DB012057B	9,477	1.7	271	74	7,964
1/29/2002	DB012058B	9,477	1.7	280	74	7,964
1/29/2002	DB012075A	10,085	1.7	288	80	8,474
1/29/2002	DB012076A	10,085	1.7	276	74	8,474
1/29/2002	DB012077A	10,085	1.7	293	74	8,474
1/29/2002	DB012078A	10,085	1.7	295	74	8,474
1/30/2002	DB012059B	9,447	1.7	270	84	7,964
1/30/2002	DB012060B	9,477	1.7	269	84	7,964
1/30/2002	DB012061B	9,477	1.7	266	84	7,964
1/30/2002	DB012079A	10,085	1.7	292	84	8,474
1/30/2002	DB012080A	10,085	1.7	316	84	8,474
1/30/2002	DB012081A	10,085	1.7	290	84	8,474
1/31/2002	DB012062B	9,477	1.7	269	84	7,964
1/31/2002	DB012063B	9,477	1.7	264	84	7,964
1/31/2002	DB012082A	10,085	1.7	290	84	8,474
1/31/2002	DB012083A	10,085	1.7	290	84	8,474

<i>Start</i>	<i>Bx</i>	<i>DCNB Used</i>	<i>41070 Platinum Catalyst</i>	<i>41030 Hydrogen</i>	<i>45090 50% R Caustic</i>	<i>Crude DCA Produced</i>
		1,444,161	252	39,337	12,380	1,210,859
<i>Report Total</i>						

Tuesday, February 05, 2002

DCA Drummed Material From 1/2 To: 2/1

<i>Date Entered</i>	<i>Date Started</i>	<i>Bx</i>	<i>3010 Pkg</i>	<i>3020</i>
2/1/2002	1/31/2002	reworked material	✓ -3	-1,650
			✓ -3	-1,650

DCA Bulk Kgs Prod

Monday, February 04, 2002

From 1/2 To: 2/1

<i>Date Entered</i>	<i>Date Started</i>	<i>3020 DCA Bulk Used</i>	<i>3870 DCA Bulk Kgs Prod</i>
1/28/2002	1/30/2002	38,540	17,482
1/25/2002	1/28/2002	39,360	17,854
		77,900	35,336

Tuesday, February 05, 2002

DCA Raw Materials Received For The Period From 1/1 To 1/31

Item No	Description	Shipper	Date	RR#	Carrier	R/C #	Qty	Misc
45090	50% Caustic							
		Brenntag						
			1/2/2002	19819	CTL		44,740	
			1/4/2002	19830	CTL		46,340	
			1/8/2002	19839	CTL		45,300	
			1/10/2002	19847	CTL		44,420	
			1/17/2002	19889	CTL		46,340	
			1/19/2002	19899	CTL		45,560	
			1/21/2002	19908	CTL		44,520	
			1/26/2002	19831	CTL		46,100	
			1/29/2002	19946	CTL		46,840	
						Total by Shipper:	410,160	✓
		Ideal						
			1/13/2002	19866	Quality Carriers		46,680	
						Total by Shipper:	46,680	✓
						Total by Item No:	456,840	
41030	Hydrogen							
		Praxair						
			1/1/2002	19812	Praxair		4,440	
			1/5/2002	19833	Praxair		1,060	
			1/9/2002	19841	Praxair		6,020	
			1/12/2002	19864	Praxair		6,840	
			1/15/2002	19874	Praxair		7,500	
			1/17/2002	19891	Praxair		3,820	
			1/19/2002	19900	Praxair		1,860	
			1/22/2002	19912	Praxair		7,120	

Item No	Description	Shipper	Date	RR#	Carrier	R/C #	Qty	Misc
			1/23/2002	19915	Praxair		1,660	
			1/27/2002	19934	Praxair		7,460	
			1/31/2002	19954	Praxair		6,860	
						Total by Shipper:	54,640	✓
						Total by Item No:	54,640	✓
41060	Lime	Brenntag						
			1/15/2002	19879	Milan Express		30,000	
						Total by Shipper:	30,000	✓
						Total by Item No:	30,000	✓
41020	Nitric Acid	El Dorado						
			1/2/2002	19817	Miller		49,100	
			1/10/2002	19845	Miller		48,780	
			1/13/2002	19867	Miller		48,120	
			1/14/2002	19872	Miller		49,660	
			1/15/2002	19880	Miller		22,840	26,460lbs unloaded @unit 4
			1/16/2002	19884	Miller		49,600	
			1/18/2002	19898	Miller		18,800	
			1/21/2002	19906	Miller		49,420	
			1/25/2002	19926	Miller		48,740	
			1/27/2002	19933	Miller		49,080	
			1/29/2002	19945	Miller		48,580	
						Total by Shipper:	482,720	✓
						Total by Item No:	482,720	✓
41000	ODCB	Metachem						
			1/8/2002	19818	AKMD	NATX72895	185,140	

<i>Item No</i>	<i>Description</i>	<i>Shipper</i>	<i>Date</i>	<i>RR#</i>	<i>Carrier</i>	<i>R/C #</i>	<i>Qty</i>	<i>Misc</i>
			1/12/2002	19060	Midland	PLCX221742	184,700	
			1/15/2002	19061	Midland	UTLX640741	185,400	
			1/21/2002	19066	Midland	GATX1841	184,810	
			1/21/2002	19063	Midland	GATX34270	185,370	
			1/24/2002	19065	AKMD	UTLX660949	175,800	
			1/25/2002	19064	AKMD	TIMX2610	184,400	
						Total by Shipper:	1,285,620	
						Total by Item No:	1,285,620	✓
41070	Platinum Carbon Catalyst	Johnson Matthey						
			1/28/2002	19938	Roadway		331	
						Total by Shipper:	331	
						Total by Item No:	331	✓
41010	Sulfuric Acid	El Dorado						
			1/1/2002	19811	Miller		49,140	
			1/4/2002	19826	Miller		45,560	
			1/10/2002	19848	Miller		48,960	
			1/11/2002	19861	Miller		49,060	
			1/14/2002	19868	Miller		48,500	
			1/14/2002	19875	Miller		48,860	
			1/15/2002	19878	Miller		49,060	
			1/16/2002	19881	Miller		27,080	21880lbs unloaded@unit4
			1/16/2002	19886	Miller		49,020	
			1/17/2002	19893	Miller		49,560	
			1/19/2002	19901	Miller		49,360	
			1/20/2002	19903	Miller		49,340	
			1/21/2002	19909	Miller		48,820	

<i>Item No</i>	<i>Description</i>	<i>Shipper</i>	<i>Date</i>	<i>RR#</i>	<i>Carrier</i>	<i>R/C #</i>	<i>Qty</i>	<i>Misc</i>
			1/24/2002	19921	Miller		48,420	
			1/25/2002	19929	Miller		49,680	
			1/27/2002	19935	Miller		49,240	
			1/28/2002	19941	Miller		49,160	
			1/31/2002	19955	Miller		49,180	
						Total by Shipper:	858,000	
						Total by Item No:	858,000	
4	Tepa							
		Ideal						
			1/29/2002	19943	Idca		1,844	
						Total by Shipper:	1,844	
						Total by Item No:	1,844	

Monday, February 04, 2002

DCA Miscellaneous By Batch By Period From 1/2 To 2/1

Entry	Ferrous Sulfate	TEPA	41630 Morph	41090 35 % Perox
1/9/2002	12	0.00	0	500
1/10/2002	12	0.00	0	500
1/13/2002	12	0.00	0	500
1/22/2002	0	17.00	0	0
1/28/2002	0	12.00	0	0
1/31/2002	0	3.00	0	0
Report total	36	32	0	1,500

Monday, February 04, 2002

DCA Shipments By Period From 1/1 To 1/31

<i>Date</i>	<i>B/L</i>	<i>Ship To</i>	<i>Booking</i>	<i>Vessel</i>	<i>Container</i>	<i>Item No</i>	<i>Bx No</i>	<i>Qty</i>
1/25/2002	4-22308	North Hungaria	DHHB10829	Lykes Motivator	TOLU916057-3	3870		17,854
1/30/2002	4-22320	North Hungaria	DHHB10829	Lykes Motivator	TRLU027113-9	3870		17,482

Total by item: 35,336
Report Total: 35,336 ✓

Monday, February 04, 2002

Diuron Production by Period by Batch From: 1/2 To: 2/1

Started	Bx	DCPI Used	DMA Used	Heptane Used	Bags Prod	Diuron Std	Diuron B	B-Grade Used	Diuron Off Spec	Misc
12/31/2001	571275	0	0	0	5	5,000	0	0	0	0
12/31/2001	571276	0	0	0	5	5,000	0	0	0	0
1/1/2002	572001	3,900	1,040	0	5	5,000	0	0	0	0
1/1/2002	572002	3,945	1,120	0	5	5,000	0	0	0	0
1/2/2002	572003	3,825	1,075	0	5	5,000	0	0	0	0
Report Totals:		11,670	3,235	0	25	25,000	0	0	0	0
		40150	41650	41660		3030	3040			

Corrections for March and April production due to incorrect numbers being reported.

Total production for March and April should have been 220,200lbs. (321 Std.-Grade bags @ 600lbs ea.--46 B-Grade @ 600lbs. ea).

Made corrections in production October 8th on Std Grade(-6,382lbs) - B-Grade(+6,700lbs) to correct inventory.

Monday, February 04, 2002

Diuron Shipments for the Period From 1/1 To 1/31

Date	Item No	Product	Bill of Lading	Ship To	Shipper	Lot#	Qty	Misc
1/18/2002	3030	Diuron Std Grad	4-22241	Biesterfeld/Platte C	Trans Carriers	see file for lot#	28,000	50116
							Sub Total By Ship to	28,000
1/21/2002	3030	Diuron Std Grad	4-22242	Biesterfeld/Platte C	Trans Carriers	see file for lot#	27,000	Order#50116
							Sub Total By Ship to	27,000
							Total by Item No:	55,000 ✓
1/31/2002	3040	Diuron B Grade	4-22325	Odom	Trans Carriers	52@1000lbs ea	31,200	Order#50186 rel#1
							Sub Total By Ship to	31,200
							Total by Item No:	31,200 ✓

Monday, February 04, 2002

Acifluorfen Production by Period by Batch From 1/2 To 2/1

<i>Started</i>	<i>Bx</i>	<i>41700 Mixed Acid</i>	<i>41020 Nitric Acid</i>	<i>41710 A Anhydride</i>	<i>41010 Sulfuric Acid</i>	<i>41720 E Dichloride</i>	<i>41740 Perklone D</i>	<i>45090 50% Caustic</i>	<i>90200 R118118</i>	<i>Acifluorfen</i>	<i>% AI</i>	<i>100% AI</i>	<i>5120 100% Kg</i>	<i>Misc</i>
1/1/2002	01	0	1,567	4,400	1,020	0	0	0	16,500	14,840	38.40%	5,699	2,585	
1/1/2002	02	0	1,582	4,290	1,030	0	0	16,050	16,500	14,930	38.80%	5,494	2,492	
1/2/2002	03	0	1,574	4,250	760	0	0	12,610	16,500	14,050	37.41%	5,256	2,384	
1/3/2002	04	0	1,577	4,310	980	0	0	18,290	16,500	13,960	39.50%	5,514	2,501	
1/4/2002	05	0	1,610	4,410	1,000	0	0	0	16,500	14,590	39.50%	5,763	2,614	
1/4/2002	06	0	1,567	4,400	960	0	0	29,560	16,500	14,120	38.80%	5,479	2,485	
1/5/2002	07	0	1,567	4,400	960	0	0	13,352	16,500	13,940	38.35%	5,346	2,425	
1/6/2002	08	0	1,585	4,290	1,000	0	0	0	16,500	17,360	33.80%	5,868	2,662	
1/6/2002	09	0	1,600	4,400	1,000	0	0	24,350	16,500	12,950	39.70%	5,141	2,332	
1/7/2002	010	0	1,567	4,400	1,200	0	0	21,840	16,500	14,120	40.40%	5,704	2,588	
1/7/2002	011	0	1,576	4,320	1,000	0	0	12,336	16,500	13,800	40.30%	5,561	2,523	
1/9/2002	012	0	1,469	3,860	640	0	0	0	18,500	13,590	39.60%	5,382	2,441	
1/9/2002	013	0	1,583	4,300	1,000	0	0	21,570	16,500	13,930	40.10%	5,586	2,534	
1/10/2002	014	0	1,539	4,180	1,070	0	0	0	16,500	13,950	39.00%	5,441	2,468	
1/10/2002	015	0	1,594	4,330	1,000	0	0	13,430	16,500	14,060	39.20%	5,512	2,500	
1/11/2002	016	0	1,626	4,160	970	0	0	0	16,500	14,130	39.00%	5,511	2,500	
1/11/2002	017	0	1,585	4,310	1,000	0	0	13,044	16,500	13,800	38.70%	5,341	2,422	
1/12/2002	018	0	1,640	4,410	500	0	0	28,360	16,500	13,780	38.40%	5,282	2,400	
1/13/2002	019	0	1,656	4,470	800	0	0	0	16,500	13,910	39.50%	5,494	2,492	
1/13/2002	020	0	1,543	4,060	920	0	0	12,004	16,500	14,160	39.20%	5,551	2,518	
1/14/2002	021	0	1,562	4,280	900	0	0	0	16,500	13,690	40.00%	5,476	2,484	

<i>Started</i>	<i>Bx</i>	<i>41700 Mixed Acid</i>	<i>41020 Nitric Acid</i>	<i>41710 A Anhydride</i>	<i>41010 Sulfuric Acid</i>	<i>41720 E Dichloride</i>	<i>41740 Perklone D</i>	<i>45090 50% Caustic</i>	<i>90200 R118118</i>	<i>Acifluorfen</i>	<i>% AI</i>	<i>100% AI</i>	<i>5120 100% Kg</i>	<i>Misc</i>
1/14/2002	022	0	1,494	3,960	1,000	0	0	19,240	16,500	15,420	37.80%	5,829	2,644	
1/15/2002	023	0	1,471	4,000	820	0	0	8,320	16,500	13,050	40.90%	5,337	2,421	
1/16/2002	024	0	1,551	4,200	500	0	0	0	16,500	13,390	41.90%	5,610	2,545	
1/16/2002	025	0	1,472	4,000	1,120	0	0	13,384	16,500	13,680	39.80%	5,445	2,470	
1/17/2002	026	0	1,520	4,080	1,020	0	0	5,116	16,500	13,200	41.60%	5,491	2,491	
1/18/2002	027	0	1,561	4,050	500	0	0	0	16,500	13,010	41.60%	5,412	2,455	
1/18/2002	028	0	1,608	4,360	1,460	0	0	12,444	16,500	14,220	40.10%	5,702	2,687	
1/19/2002	029	0	1,484	3,750	800	0	0	0	16,500	14,160	40.76%	5,772	2,618	
1/19/2002	030	0	1,615	4,380	900	0	0	13,512	16,500	14,050	40.20%	5,648	2,562	
1/20/2002	031	0	1,645	4,380	1,020	0	0	5,932	16,500	14,880	38.93%	5,793	2,628	
1/21/2002	032	0	1,608	4,320	910	0	0	0	16,500	14,000	40.64%	5,690	2,581	
1/21/2002	033	0	1,572	4,280	1,180	0	0	13,844	16,500	14,540	39.30%	5,714	2,592	
1/22/2002	034	0	1,605	4,340	800	0	0	0	16,500	14,130	38.76%	5,477	2,484	
1/22/2002	035	0	1,568	4,250	1,050	0	0	13,004	16,500	13,860	37.61%	5,213	2,364	
1/23/2002	036	0	1,618	4,150	1,000	0	0	16,128	16,500	15,200	40.45%	6,148	2,789	
1/24/2002	037	0	1,567	4,250	1,010	0	0	0	16,500	13,040	40.22%	5,245	2,379	
1/24/2002	038	0	1,600	4,250	1,000	0	0	8,280	16,500	14,400	40.52%	5,835	2,647	
1/25/2002	039	0	1,557	4,620	1,000	0	0	15,340	16,500	13,930	41.78%	5,820	2,640	
1/26/2002	040	0	1,629	4,320	1,000	0	0	4,880	16,500	13,650	41.76%	5,700	2,586	
1/27/2002	041	0	1,570	4,250	1,150	0	0	7,400	16,500	13,640	41.34%	5,639	2,558	
1/28/2002	042	0	1,567	4,250	1,100	0	0	0	16,500	13,760	41.81%	5,763	2,610	
1/28/2002	043	0	1,568	4,150	1,070	0	0	11,892	16,500	13,470	41.20%	5,550	2,517	
1/29/2002	044	0	1,763	4,150	910	0	0	0	16,500	13,650	41.25%	5,631	2,554	

<i>Started</i>	<i>Ex</i>	<i>41700 Mixed Acid</i>	<i>41020 Nitric Acid</i>	<i>41710 A Ankydride</i>	<i>41010 Sulfuric Acid</i>	<i>41720 E Dichloride</i>	<i>41740 Perklone D</i>	<i>45090 50% Caustic</i>	<i>90200 R118118</i>	<i>Acifluorfen</i>	<i>% AI</i>	<i>100% AI</i>	<i>5120 100% Kg</i>	<i>Misc</i>
1/29/2002	045	0	0	4,280	1,120	0	0	15,524	16,500	13,580	41.60%	5,649	2,562	
1/30/2002	046	0	1,562	4,260	870	0	0	0	16,500	0	0.00%	0	0	
1/30/2002	047	0	0	4,150	500	0	0	8,092	16,500	0	0.00%	0	0	
1/31/2002	ww	0	0	0	0	0	0	10,360	0	0	0.00%	0	0	
Report Totals:		0	70,942	199,660	44,520	0	0	439,468	775,500	631,570	39.66%	250,511	113,631	

Monday, February 04, 2002

Acifluorfen Materials Received for the Period From 1/1 To 1/31

Date	Item No	Product	Receiver	Supplier	Shipper	Bill of Lading	Container	Qty	
1/16/2002	41010	Sulfuric Acid	19881	El Dorado	Miller		523234	21,880	27,080lbs unloaded@unit
								Sub Total by Supplier:	21,880
								Sub Total by Item:	21,880
1/15/2002	41020	Nitric Acid	19880	El Dorado	Miller		523125	26,460	22,840lbs unloaded@unit
1/18/2002	41020	Nitric Acid	19898	El Dorado	Miller		523491	30,640	18,800 unloaded @unit6
								Sub Total by Supplier:	57,100
								Sub Total by Item:	67,100
1/12/2002	41710	A Anhydride	19863	Celanese	Groendyke		501948	45,280	
1/17/2002	41710	A Anhydride	19887	Celanese	Groendyke		3008	45,140	
1/22/2002	41710	A Anhydride	19911	Celanese	Groendyke		512686	45,060	
1/30/2002	41710	A Anhydride	19950	Celanese	Groendyke		3466	44,720	
								Sub Total by Supplier:	180,180
								Sub Total by Item:	180,180
1/31/2002	41740	Perklone D	19952	JSL Chemical	Wynne Transport		3433	24,580	
								Sub Total by Supplier:	24,580
								Sub Total by Item:	24,580
1/9/2002	90200	R118118	19840	Syngenta	Superior		BLKU120041-1	45,000	
1/17/2002	90200	R118118	19888	Syngenta	Superior		BLKU120126-0	44,420	
1/18/2002	90200	R118118	19896	Syngenta	Superior		BLKU120301-0	45,000	
1/21/2002	90200	R118118	19905	Syngenta	Superior		BLKU120395-6	44,920	
1/25/2002	90200	R118118	19925	Syngenta	Superior		BLKU120400	44,700	
1/25/2002	90200	R118118	19920	Syngenta	Superior		BLKU120273-3	44,680	
1/29/2002	90200	R118118	19944	Syngenta	Superior		BLKU120178-4	44,940	
								Sub Total by Supplier:	313,680
								Sub Total by Item:	313,680

Cyclanilide Raw Materials Used

From: 1/2 TO: 2/1

Started	Bx#	2,4 DCA	CPDM	41200 Xylene	Sodium Meth	46240 Formic Acid	45090 50% Caustic	Wet Cake Prod
12/30/2001	781030	0	0	0	0	1,000	1,224	3,319
12/31/2001	781031	0	0	0	0	1,000	2,550	3,101
1/1/2002	781032	1,761	1,761	1,500	2,283	1,020	2,020	1,834
1/1/2002	781033	1,762	1,764	1,500	2,283	1,000	3,030	3,172
1/2/2002	781034	1,774	1,763	1,500	2,283	1,050	3,182	2,439
1/3/2002	781035	1,763	1,763	1,500	2,283	1,000	2,020	3,352
1/4/2002	781036	1,771	1,763	1,500	2,283	967	2,886	2,610
1/4/2002	781037	1,763	1,764	1,500	2,283	1,000	2,020	3,287
1/8/2002	781038	1,764	1,764	1,500	2,283	1,037	2,632	2,926
1/6/2002	781039	1,776	1,754	1,500	2,283	949	3,060	3,073
1/6/2002	781040	1,771	1,747	1,500	2,283	946	5,855	3,100
1/7/2002	781041	0	0	0	0	0	0	3,553
1/7/2002		1,771	0	1,500	2,283	1,010	2,295	0
1/8/2002	781042	1,774	0	1,500	2,283	0	0	0
1/8/2002		0	0		0	0	0	2,892
1/9/2002	781043	1,763	1,767	1,500	2,283	1,000	3,030	2,629
1/8/2002	781044	1,765	1,761	1,500	2,283	943	2,020	3,760
1/10/2002	781045	1,763	1,763	1,500	2,283	0	0	0
1/10/2002		0	0	0	0	1,000	3,030	2,309

<i>Started</i>	<i>Bx#</i>	<i>2,4 DCA</i>	<i>CPDM</i>	<i>41200 Xylene</i>	<i>Sodium Meth</i>	<i>46240 Formic Acid</i>	<i>45090 50% Caustic</i>	<i>Wet Cake Prod</i>
1/10/2002	781046	0	1,783	0	2,283	973	0	2,907
1/10/2002		1,763	0	1,500	0	0	0	0
1/11/2002	781047	1,763	1,763	1,500	2,283	1,020	3,030	3,029
1/11/2002	781048	1,763	1,763	1,500	2,283	992	3,030	2,600
1/12/2002	781049	1,764	1,763	1,500	2,283	100	3,030	2,697
1/13/2002	781050	1,765	1,765	1,500	2,283	0	0	0
1/13/2002		0	0	0	0	1,037	2,660	2,802
1/13/2002	781051	1,763	0	1,500	0	0	0	0
1/13/2002		0	1,767	0	2,283	900	3,030	0
1/13/2002		0	0	0	0	0	0	2,235
1/14/2002	781052	0	0	0	0	875	3,030	2,688
1/14/2002		1,760	1,760	1,500	2,283	0	0	0
1/16/2002	781053	0	0	0	0	876	1,020	2,657
1/16/2002		1,764	1,764	1,500	2,283	0	0	0
1/15/2002	781054	0	1,763	0	2,283	889	2,611	3,503
1/15/2002		1,763	0	1,500	0	0	0	0
1/16/2002	781055	1,763	1,763	1,500	2,283	900	2,020	2,882
1/17/2002	781056	1,760	1,763	1,500	2,283	887	2,495	0
1/17/2002		0	0	0	0	0	1,262	3,924
1/17/2002	781057	1,767	1,765	1,500	2,283	0	0	0

<i>Started</i>	<i>Bx#</i>	<i>2,4 DCA</i>	<i>CPDM</i>	<i>41200 Xylene</i>	<i>Sodium Meth</i>	<i>46240 Formic Acid</i>	<i>45090 50% Caustic</i>	<i>Wet Cake Prod</i>
1/17/2002	781057	0	0	0	0	1,061	2,373	1,045
1/18/2002	781058	1,763	1,764	1,500	2,283	950	2,525	3,062
1/18/2002	781059	1,763	1,763	1,500	2,283	950	2,525	2,416
1/19/2002	781060	1,763	1,776	1,500	2,283	975	2,525	3,223
1/19/2002	781061	1,768	1,763	1,500	2,283	943	2,020	0
1/19/2002		0	0	0	0	0	0	4,691
1/20/2002	781062	1,763	0	1,500	0	0	0	0
1/20/2002		0	1,761	0	2,283	905	2,020	0
1/20/2002		0	0	0	0	0	0	2,105
1/21/2002	781063	1,763	1,763	1,500	2,283	0	0	0
1/21/2002		0	0	0	0	984	2,525	2,637
1/22/2002	781064	1,763	1,763	1,500	2,283	1,146	4,212	2,541
1/22/2002	781065	1,765	1,760	1,500	2,283	1,013	0	0
1/22/2002		0	0	0	0	0	0	2,166
1/23/2002	781066	0	0	0	0	1,047	2,642	2,739
1/23/2002		1,764	1,764	1,500	2,283	0	0	0
1/23/2002	781067	0	0	0	0	942	2,703	0
1/23/2002		0	0	0	0	0	0	2,824
1/23/2002		1,763	0	1,500	2,283	0	0	0
1/24/2002	781068	1,764	1,764	1,500	2,283	0	0	0

<i>Started</i>	<i>Bx#</i>	<i>2,4 DCA</i>	<i>CPDM</i>	<i>41200 Xylene</i>	<i>Sodium Meth</i>	<i>46240 Formic Acid</i>	<i>45090 50% Caustic</i>	<i>Wet Cake Prod</i>
1/24/2002	781068	0	0	0	0	1,079	2,550	4,548
1/24/2002	781069	1,764	0	1,500	0	0	0	0
1/24/2002		0	1,763	1,500	2,283	1,092	3,030	2,261
1/25/2002	781070	1,764	1,763	1,500	2,283	942	2,020	2,897
1/26/2002	781071	1,763	1,763	1,500	2,283	942	2,020	3,148
1/26/2002	781072	0	0	0	0	0	0	4,460
1/26/2002		1,765	1,763	1,500	2,283	1,101	2,499	0
1/27/2002	781073	1,763	1,763	1,500	2,283	0	0	0
1/27/2002		0	0	0	0	992	2,020	2,974
1/27/2002	781074	1,764	0	1,500	0	0	0	0
1/27/2002		0	1,762	0	2,283	1,031	5,353	0
1/27/2002		0	0	0	0	0	0	2,781
1/28/2002	781075	0	0	0	0	1,050	2,020	3,178
1/28/2002		1,763	1,766	1,500	2,283	0	0	0
1/28/2002	781076	0	0	0	0	0	0	2,524
1/28/2002		0	1,785	0	2,283	1,050	2,525	0
1/28/2002		1,760	0	1,500	0	0	0	0
1/29/2002	781077	0	0	0	0	0	1,010	2,630
1/29/2002		1,763	1,764	1,500	2,283	0	0	0
1/29/2002	781078	1,763	0	1,500	0	0	0	0

<i>Started</i>	<i>Bx#</i>	<i>2,4 DCA</i>	<i>CPDM</i>	<i>41200 Xylene</i>	<i>Sodium Meth</i>	<i>46240 Formic Acid</i>	<i>45090 50% Caustic</i>	<i>Wet Cake Prod</i>
1/29/2002	781078	0	1,762	0	2,283	942	3,030	0
1/29/2002		0	0	0	0	0	0	3,578
1/30/2002	781079	1,765	1,763	1,500	2,283	942	3,030	0
1/30/2002		0	0	0	0	0	3,030	2,683
1/31/2002	781080	1,764	1,765	1,500	2,283	0	0	0
1/31/2002	781081	1,763	1,763	1,500	2,283	0	0	0
		88,225	82,882	76,500	114,150	46,450	128,169	146,069

5170

<i>Date Entered</i>	<i>Date Started</i>	<i>Bx#</i>	<i>Wet Cake Used</i>	<i>Chunk Drs Used</i>	<i>Bx No Charged</i>	<i>No Drums</i>	<i>Cyclanilide Lbs Prod</i>	<i>Chunk Drs Prod</i>	<i>Chunk material on hand</i>	<i>Misc</i>
1/31/2002	1/29/2002	7811019	0	0		54	5,940	1,171	0	
2/1/2002	1/31/2002	7811020	7,053	1,171	43,77	0	0	0	0	
			71,551	12,368		555	61,050	11,946	0	

Monday, February 04, 2002

TA Transferred In From 1/2 To: 2/1

<i>Date Entered</i>	<i>Date Received</i>	<i>Received From</i>	<i>17000 Supersacks</i>	<i>17120 25 KG Bxs</i>	<i>17270 Tris-Ultra Pure</i>	<i>17280 Tris Hcl 25Kg</i>	<i>17350 Tris UP Bulk Kg</i>	<i>Misc</i>
1/31/2002	1/29/2002	BPS-19948	279	0	0	0	0	<i>1-Supersack</i>
1/31/2002	1/29/2002	BPS-19948	200	0	0	0	0	this was 1 dr @200lbs
1/31/2002	1/29/2002	BPS-19948	275	0	0	0	0	this was 1dr @ 275lbs
			754	0	0	0	0	

2-AB Production

Tuesday, February 05, 2002

From: 1/2 To: 2/1

<i>Entered</i>	<i>Started</i>	<i>Batch#</i>	<i>Full Drs</i>	<i>Partial Drs</i>	<i>Total Lbs</i>	<i>17380 Total Kgs</i>	<i>Misc</i>
1/9/2002	10/20/2001	9316001	8	0	3,456	1,568	corrected prod
1/9/2002	11/9/2001	9316002	1	0	432	196	corrected prod
1/9/2002	11/15/2001	9316003	1	0	432	196	corrected prod
1/9/2002	11/27/2001	9316005	2	0	864	392	corrected prod
1/9/2002	12/15/2001	9316009	-1	0	-432	-196	
1/9/2002	1/7/2002	9316012	10	1	4,320	1,960	1 part @321
			21	1	9,072	4,116	

RICECO

SUITE 2428 - 5100 POPLAR AVENUE - MEMPHIS, TN 38137

PHONE: 901-684-5390

FAX: 901-684-5391

DATE: 02-07-02
 NAME: Keith Guidroz
 FIRM: Gilscot Guidroz
 FAX: 504-731-1998
 FROM: Catalina Henao
 PHONE: (901)2605401
 EMAIL: catalina.henao@ricecollc.com
 C.C: Lisa Walker

NO. OF PAGES:
(INCLUDING COVER)

5

Please get Booking for:

Importer: Aventis Cropscience -
 Ship To: Bangkok
 P/O No: 22102001
 Our order No : 28689
 Ready on Factory on:
 To ship on: 02/20/02
 Bags: 408
 Vessel: OOCL AMERICA V58
 Special Notes: C/O : 02/12/02
 Please find attached the order No 28689 and Marks
 Instructions
 Coordinate with Lisa Walker

Thank you,

Catalina Henao

*OK
 CW
 Ship 2/11 -
 10mm*



5100 Poplar Ave., Suite 242B
 Memphis, TN 38137
 U.S.A.
 Phone : (888)-835-1313
 Fax : (901)-684-5391

Confirmation

Customer:
 AVENTIS CROPSCIENCE(THAI)
 FL.17-18 PANJATHANI TOWER, 127/22-2
 10120 BANGKOKNONSEE YANNAWA
 THAILAND

Buyer Name:

Origin:
 AVENTIS CROPSCIENCE(THAI)
 FL.17-18 PANJATHANI TOWER, 127/22-2
 10120 BANGKOKNONSEE YANNAWA
 THAILAND

Order Number 28689
Order Date 01/30/2002
Customer P.O.NUM. 22102001
Incoterms CFR DESTINATION
Currency USD US Dollar
Gross Weight 11220.000 KG
Net Weight 10200.000 KG

Info:
Sales Ref. Num **Area Manager** 90169 Rarel Vega
Proforma Inv.Num **Packing** 25 KG/ BAG
LOC Num
Payment Terms BL30 Net 30 days from B/L date
Special Label SHIPPING MARKS - Attached
Shipping Instructions 20' CONTAINER
Special Instructions TO CHECK CUSTOMER P.O

Item	Material Description	Quantity	Unit Price	Amount
0010	12013 FLAKE TECH-C 25KG Plant : 401 West Helena Plant (RiceCo) Shipping Point : 4010 West Helena (RiceCo)	10,200 KG	3.70 per 1 KG	37,740.00
			Ex-Plant	37,740.00
			Total Amount	37,740.00

Aventis CropScience



Aventis CropScience (Thailand) Ltd.
 127/22-23 Panjathani Tower, 17th-18th Floor Nonssee Rd., Chongnonsee
 Yannawa, Bangkok 10120 Tel. (662) 6811126 Fax. (662) 6811124
 บริษัท อเวนติส ครอปไซน์ (ประเทศไทย) จำกัด
 127/22-23 ชั้นที่ 17-18 ถนนนนทบุรี แขวงถนนนครไชยศรี เขตนนทบุรี กรุงเทพฯ 10120
 โทร. (662) 6811126 โทรสาร (662) 6811124

Purchase Order

No. : 22102001

Date : 30/01/2002

Page No : 1/1

Regulation No. : BPLB-2975

Requestion Date: 30/01/2002

Charge to: 1314150020000000

Requestioner: Sales Forecast

Marks

Vendor: RICECO LLC
 5100 POPLAR AVENUE, MEMPHIS
 TENNESSEE 38137, U.S.A.
 TEL: 001-1-901-6845381, F:901-6845391
 ATTN: MRS. M. SAM BONDURANT/MR. YAFABE

Ship to: AVENTIS CROPSCIENCE (THAILAND)
 17-18th FL. PANJATHANI TOWER
 127/22-23 NONSSEE RD. CHONGNONSSEE
 YANNAWA, BANGKOK 10120.

Vendor ID	Delivery Item	Cancellation Date
ONR206	ETA-BKK 05/01/2002	-
Payment Term	Ship Via	Shipment Condition
T/T 30 DAYS	SEA	CIF

Documents to be submitted immediately to :
 Panjathani Tower, 17th Fl.
 127/22 Nonssee Road,
 Chongnonsee, Yannawa
 Bangkok 10120, Thailand
 Attn: Suthama C. - Purchasing

Shipping Marks
 AVENTIS
 PROPANIL TECH
 BCL-221-02-001
 Batch/Lot No....
 BANGKOK

Item No.	Quantity	Unit	Description	Unit price	Total Amount
CNRAPRO95421	10,200.00	KG	PROPANIL TECHNICAL FLAKE 25 KG ในแพคเกจ แพคเกจ หนัก 25 กก. Packing : 25 Kgs. x 408 bags REMARKS: - Please confirm acceptance of order and advise shipment details immediately. - Shipping Marks has to be strictly shown on B/L & on individual pack as our instruction. - Shipping docs directly courier to Suthama	3.70	37,740.00
Remarks : Please confirm acceptance of order & advise shipment immediately. Shipping marks has to be strictly shown on B/L as our requirement.					
(USD thirty-seven thousand seven hundred forty only)				Grand Total	37,740.00

Remarks : Documents must be courier to consignee immediately ;
 1. Invoice : 3 signed originals + 3 copies, showing : Unit & total CIF price or CIF + I
 - Total FOB value, Freight & Insurance charge, Terms of Payment, Nos & Gross weight per pack,
 Country of Origin in English.
 2. Bill of Lading : 3 signed original + 3 copies,
 3. Insurance certificate in triplicate
 4. 3 signed Certificate of Analysis and Certificate of Origin.
Insurance : Goods purchased on CIF/CFR terms must be covered by first class insurance policy of invoice value
 plus at least 10% cover all risks from warehouses to warehouses Via Bangkok including war,
 strikes, riots and civil commotions. No franchise whatsoever is allowed in the insurance policy.
Special Instructions : 1. Partial shipment is not allowed. 2. Transshipment is not allowed. 3. On-dock shipment
 is not allowed. 4. When shipping various goods one B/L, please separate invoices according
 to guide numbers hereunder. 5. All foreign bank charges are for beneficiary's account.

Aventis CropScience (Thailand) Ltd.

[Signature]
 Authorized Signature

LWalker

From: "Ada" <adav@gilscot.com>
To: <Catalina.Henao@ricecolc.com>
Cc: "lisa walker" <lwalker@cvrtmail.com>
Sent: Thursday, February 07, 2002 9:50
Subject: RE: ORDER 28689

BOOKING CONFIRMATION

TO: CATALINA

DATE: 2/7/02

SHIPPER: RICECO

ORDER REF: 28689

NO. PCS & WEIGHT: 1X20' CONT FLAKE TECH-C

BKG NO.: ATLC9647

VESSEL: OOCL GERMANY V9

C/O: 2/12

SLG: 2/20

ETA: 3/14

SS CO.: BAL-NYK LINE

PLACE OF RECEIPT: MEMPHIS

LOAD PORT: LOS ANGELES

DESTINATION PORT: BANGKOK

SUPPLIER/PICK UP LOCATION: CED AR

DELIVERY INFO: GILSCOT C/O BAL-NYK LINE

BURLINGTON NORTHERN

5280 SHELBY DR.

MEMPHIS, TN

THANKS,
ADA VINCENT
GILSCOT GUIDROZ INTL, INC.

2/7/2002

AB0000025483



RiceCo L.L.C.
 5100 Poplar Ave., Suite 242B
 Memphis, TN 38137
 U.S.A.

TEL: (888) 838-1313

ATTN: LISA

Purchase order

Bill To:

RiceCo L.L.C.
 5100 Poplar Ave., Suite 242B
 Memphis, TN 38137
 U.S.A.

CEDAR CHEMICAL CORPORATION
P.O. BOX 2900, DEPARTMENT 161
MEMPHIS TN 38101-2900

Ship To:

West Helens Plant (RiceCo)
 Highway 48 Bypass
 West Helena AR 72390

PO Number	4500018329
Date	01/15/2002
Vendor No.	112619
Vendor Phone	901-260-6425
Vendor Fax	901-684-5399
Currency	USD
Payment Terms	Net 60 days from invoice date
Buyer	Kathy Liebenow
Phone	901-684-5368
Fax	901-684-5391
Ship Via	
Delivery Date	01/30/2002

Item	Description	Quantity	Unit	Price	Amount
0010	12013 FLAKE TECH-C 25KG	95,000.000	KG	3.43	325,850.00
				Net Value	325,850.00
				Total Amount	325,850.00

5 LOADS OF 760/25 KG BAGS

INSTRUCTIONS TO VENDOR:

This Purchase Order is subject to the Terms and Conditions incorporated herein as listed on the last 2 pages of this document.

SIGNATURE

(Purchasing)

DATE _____



February 28, 2002

Mr. Dan Stahl
Aventis Industrial Strategy
PO Box 12014
2 TW Alexander Drive
RTP, NC 27709

Dear Dan:

This letter is to certify that the enclosed Composition of Cyclanilide is the composition of cyclanilide technical as manufactured by Cedar Chemical Corporation (CAS No. 113136-77-9).

I have enclosed one (1) notarized original for your records. Should you need further information, please do not hesitate to let me know.

Sincerely,

Chris McGee
Vice President of Manufacturing

STATE OF TENNESSEE
COUNTY OF SHELBY

Sworn & subscribed before me this 28th day of Feb., 2002.

Notary Public

MY COMMISSION EXPIRES
DECEMBER 1, 2002





**COMPOSITION OF CYCLANILIDE
T.G.A.I.**

**CYCLANILIDE
(Technical Grade Active Ingredient)
CAS RN [113136-77-9]**



Composition of Cyclanilide (T.G.A.I.)

The composition of cyclanilide technical as manufactured by Cedar Chemical Corp complies with the Aventis CropSciences specification (Document C017391) and is as follows:

Contents: Cyclanilide 96 - 100 % w/w (C-817-06-95)

Methods: 1. - 6. C-821-07-95
7. C-816-06-95
8. KF - Titration

Results: 1.	2,4-dichloroaniline	max. 0.1 %
2.	1-(3,4-dichlorophenylaminocarbonyl)-cyclopropane carboxylic acid	max. 0.3 %
3.	1-(2,5-dichlorophenylaminocarbonyl)-cyclopropane carboxylic acid	max. 1.0 %
4.	N,N'-bis-(2,4-dichlorophenyl)-1,1-cyclopropane dicarboxamide	max. 1.5 %
5.	3-(2,4-dichlorophenylaminocarbonyl)propyl, 1-(2,4-dichlorophenylaminocarbonyl)-1-cyclopropane carboxylate	max. 1.5 %
6.	4-[2,4-dichloro[(1-[(2,4-dichloroanilino)carbonyl]cyclopropyl)carbonyl]anilino]butanoic acid	max. 0.3 %
7.	xylene, mixed isomers	max 0.5 %
8.	water	max. 0.5 %

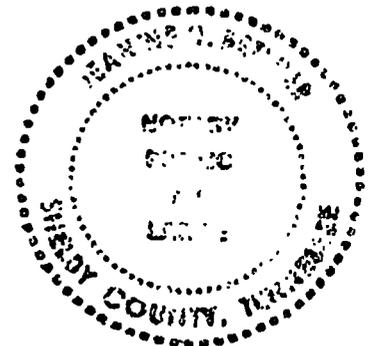
Certified true and correct by:

Chris McGee, Vice President of Manufacturing
Cedar Chemical Corporation

STATE OF TENNESSEE
COUNTY OF SHELBY

Sworn & subscribed before me this 28th day of Feb, 2002.

Notary Public MY COMMISSION EXPIRES
DECEMBER 1, 2002





February 28, 2002

Mr. Dan Stahl
Aventis Industrial Strategy
PO Box 12014
2 TW Alexander Drive
RTP, NC 27709

Dear Dan:

This letter is to certify that the enclosed Manufacturing Process (Summary) of Cyclanilide and Discussion the Formation of Impurities is the manufacturing process used by Cedar Chemical Corporation to manufacture Cyclanilide (CAS No. 113136-77-9).

I have enclosed one (1) notarized original for your records. Should you need further information, please do not hesitate to let me know.

Sincerely,

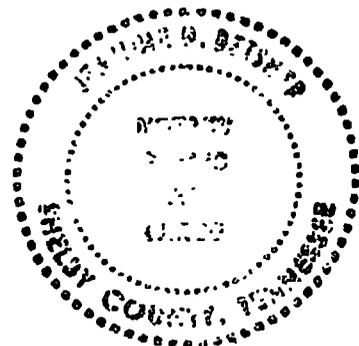
Chris McGee
Vice President of Manufacturing

STATE OF TENNESSEE
COUNTY OF SHELBY

Sworn & subscribed before me this 28th day of Feb., 2002.

Notary Public

MY COMMISSION EXPIRES
DECEMBER 1, 2002





**MANUFACTURING PROCESS (SUMMARY) OF CYCLANILIDE AND DISCUSSION
THE FORMATION OF IMPURITIES**

**CYCLANILIDE
(Technical Grade Active Ingredient)
CAS N° 113136-77-9**

NAME AND ADDRESSEE OF THE PRODUCER

AVENTIS CROPSCIENCE
Saint Pierre
55, avenue René Cassin
CP 310
69337 LYON Cedex 09

NAME AND ADDRESSEE OF THE MANUFACTURER

Cedar Chemical Corp.
49 Phillips Road # 311
Helena,
AR 72342
USA

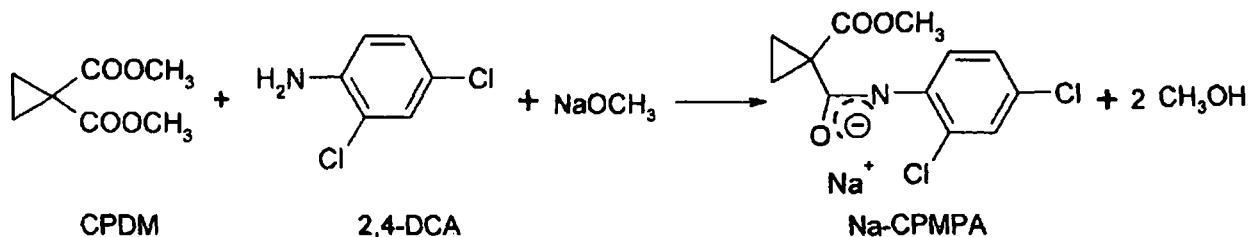
A. DESCRIPTION OF THE MANUFACTURING PROCESS

We, Cedar Chemical Corp, are producing the chemical substance cyclanilide Technical exclusively for Aventis CropScience according to the Aventis CropScience process described in document C017920.

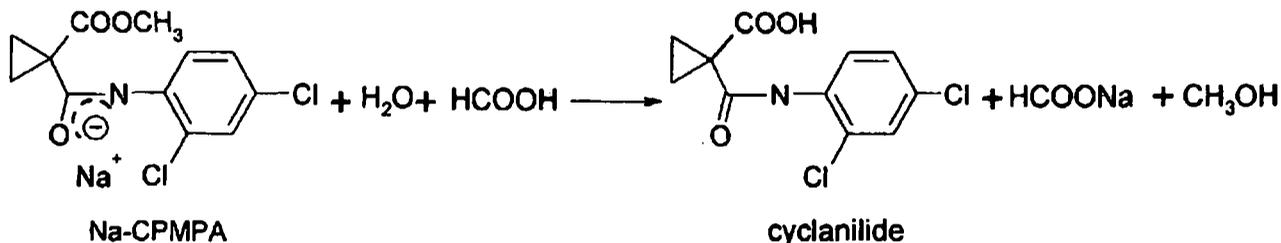
*****The following information is trade secret and property of Aventis CropScience.*****

Cyclanilide technical is produced by a 2-step integrated batch process from CPDM and 2,4-DCA. After filtration and drying, the technical product is isolated as a white solid with a purity of 97 %. The Aventis CropScience process consists of :

- 1. Condensation of cyclopropane-1,1dicarboxylic acid dimethyl ester (CPDM) and 2,4dichloroaniline to obtain sodium N-(2',4'-dichlorophenyl) 1-carbomethoxycyclopropylcarboxamidate (Na-CPMPA)**



- 2. Hydrolysis of the ester group of the sodium N-(2',4'-dichlorophenyl) 1-carbomethoxycyclopropyl carboxamidate (Na-CPMPA) with subsequent acidification to produce the desired 1-(2,4-dichlorophenylaminocarbonyl)-cyclopropane carboxylic acid (cyclanilide)**



B. DISCUSSION OF FORMATION OF IMPURITIES

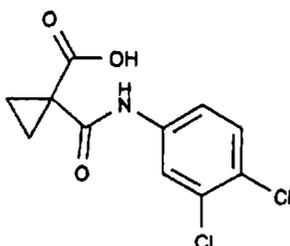
The impurities determined in technical cyclanilide are as follows :

1. *2,4-dichloroaniline*

This impurity results from an incomplete reaction during step I. It may be also formed during heating of Na-CPMPA (Step I) by a reverse reaction.

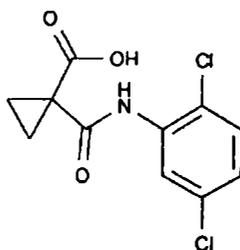
2. *1-(3,4-dichlorophenylaminocarbonyl)-cyclopropane carboxylic acid*

This impurity results from the reaction of 3,4-dichloroaniline with CPDM. 3,4-dichloroaniline is an isomer impurity of the technical 2,4-DCA starting material.



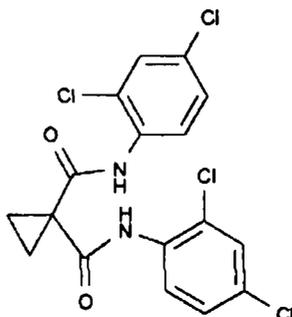
3. *1-(2,5-dichlorophenylaminocarbonyl)-cyclopropane carboxylic acid*

This impurity results from the reactions of 2,5-dichloroaniline with CPDM. 2,5-dichloroaniline is an isomer impurity of the technical 2,4-DCA starting material.



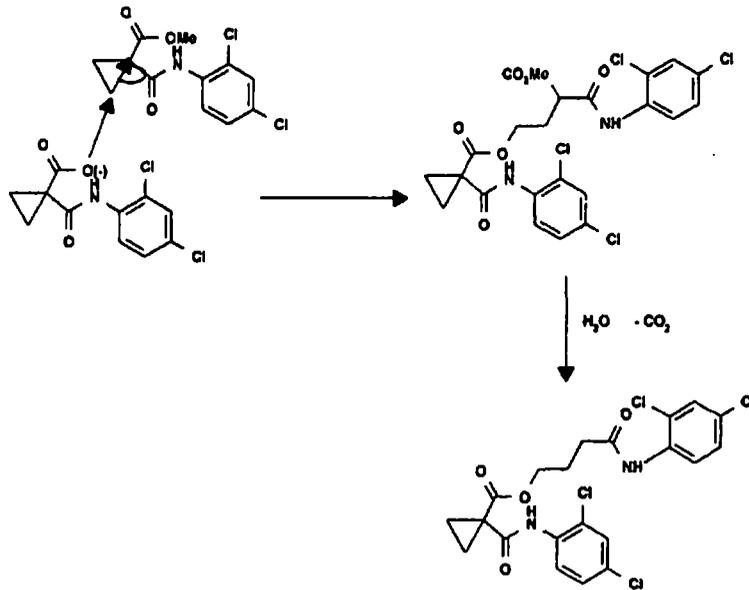
4. *N,N'-bis-(2,4-dichlorophenyl)-1,1-cyclopropane dicarboxamide*

This impurity results from a non-selective reaction of 2,4-DCA on CPDM (step I) The second ester group reacts with 2,4-DCA.



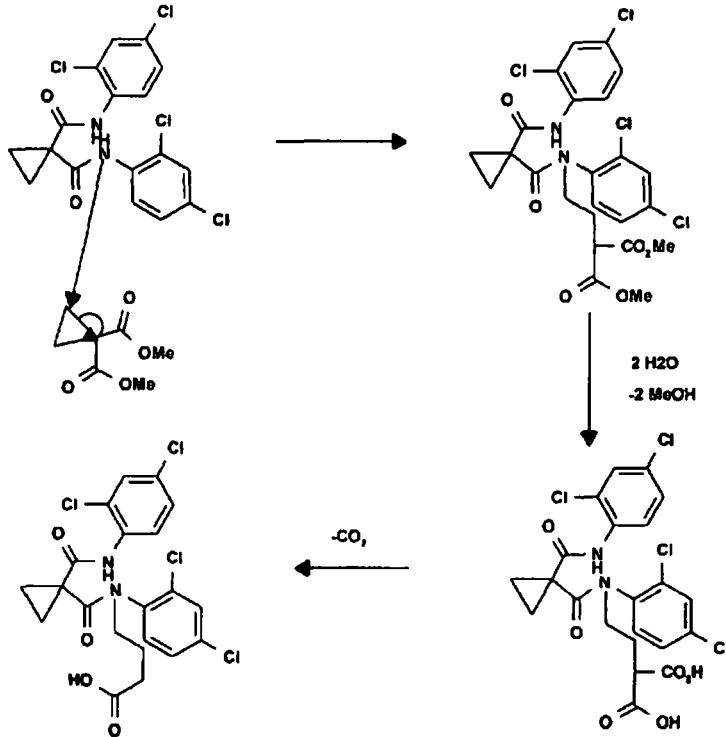
5. 3-(2,4-dichlorophenylaminocarbonyl)propyl, 1-(2,4-dichloro-phenylaminocarbonyl)-1-cyclopropane carboxylate

This impurity could result from a ring opening of CPMPA by the cyclopropane dicarboxylic acid anilide anion.



6. 4-[2,4-dichloro[N-(1-[(2,4-dichloroanilino)carbonyl]cyclopropyl)carbonyl] anilino] butanoic acid

This impurity is formed by a reaction of N,N'-bis-(2,4-dichlorophenyl)-1,1-cyclopropane dicarboxamide with CPDM resulting in a ring opening of the cyclopropane ring, followed by hydrolysis and decarboxylation of one carboxylic acid group:



7. Xylene

Xylene is the reaction solvent for steps I and II. Small quantity of xylene remains in the aqueous phase, and a part of it remains in the technical cyclanilide after drying.

8. WATER

Cyclanilide is isolated from a water suspension. Small quantity of water remains after washing and drying.

Certified true and correct by.

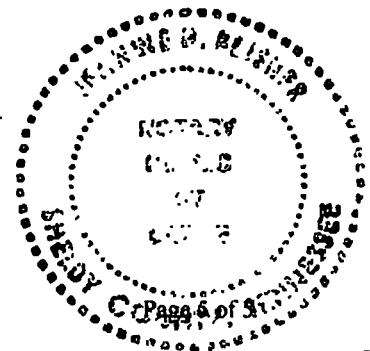
Chris McGee, Vice President of Manufacturing
Cedar Chemical Corporation

STATE OF TENNESSEE
COUNTY OF SHELBY

Sworn & subscribed before me this 28th day of Feb., 2002.

Notary Public

MY COMMISSION EXPIRES
DECEMBER 1, 2002



Rhône-Poulenc Agro

**CEDAR Chemical Corporation
Mr Geoffrey L. PRATT
5100 Poplar Ave.
Suite 2414
Memphis, TN 38137
UNITED STATES**

Lyons, le **19 November 1999**

Réf : fb/SR 189.99

**SUBJECT : SECURITY AGREEMENT FOR THE MANUFACTURE
 AND FORMULATION OF CYCLANILIDE**

Dear Geoffrey,

You will find herewith the two copies of the secrecy agreements which cover the information transfer of Cyclanilide process.

Thank you to send me readily one copy back.

Best regards.

7283161922



Serge RAVET
Toll manufacturing manager

Aventis CropScience



**CEDAR
Mr Chris McGEE
5100 Poplar Ave
Memphis, TN 38137
UNITED STATES**

March 1st, 2002

SRfb026.02

Subject : Cyclanilide Contract

Dear Chris,

You will find herewith the two copies of the cyclanilide contract signed on ACS side.

Thanks to send me back a copy with signature of Cedar representatives.

Yours faithfully,

A handwritten signature in black ink, appearing to read "Serge Ravet".

**Serge RAVET
Toll Manufacturing Manager**

**NOT
Executed
3/12/02**

MANUFACTURING AND SUPPLY AGREEMENT

THIS MANUFACTURING AND SUPPLY AGREEMENT (the "Agreement") is made and entered into as of January 1, 2001 (the "Effective Date") by and between **Cedar Chemical Corporation**, a Delaware corporation, having its principal place of business at Suite 2414 Clark Tower, 5100 Poplar Avenue, Memphis, Tennessee 38137 (hereinafter referred to as "Cedar"), and **Aventis CropScience Matières Actives**, a French "société en nom collectif" having its registered office at 14/20, rue Pierre Baizet, 69009 LYON, France (hereinafter referred to as "Aventis").

WITNESSETH:

- ◆ WHEREAS, Aventis desires to retain an independent third party contractor to manufacture for it Cyclanilide (hereinafter the "Product") from DCA and CPDM.
- ◆ WHEREAS, Cedar owns and operates a chemical manufacturing facility located at West Helena, Arkansas which, following installation of certain capital improvements and equipment defined below, is capable of producing Product from DCA and CPDM utilizing Aventis' manufacturing process disclosed by Aventis to Cedar pursuant to the Secrecy Agreement and processes disclosed to Cedar pursuant to the Degussa Secrecy Agreement and pursuant hereto;
- ◆ WHEREAS on August 31, 2000, the Parties signed a Memorandum of Understanding (the "MOU") whereby they agreed that they would promptly commence negotiations with each other in good faith with the intent of reaching an agreement satisfactory in form and substance to their respective managements and incorporating the terms and principles set forth herein.

NOW, THEREFORE, in consideration of the promises and the mutual covenants herein contained, the Parties hereto agree as follows:

Article 1. DEFINITIONS

When used in this Agreement, each of the capitalized terms set forth in this Article 1 shall have the meaning set forth below:

"Affiliate" means any entity that directly or indirectly, through one or more intermediaries, now or hereafter, controls or is controlled by or is under common control with a Party hereto, except that in countries where ownership of a majority or a controlling interest by a foreign entity is not permitted by law, rules or regulations, the parent's direct or indirect voting interest may be less than a majority or controlling interest. "Control" (including the terms "controls" "controlled by", "controlling" and "under common control with") are understood as meaning the possession, direct or indirect, of the power to direct or cause the direction of the management and policies of a person or entity whether through the ownership of voting securities, by contract or otherwise.

"Capital Improvements" means the capital improvements described in Appendix 1.

"CPDM" means (cyclopropane- 1,1-dicarboxylic acid) dimethyl ether.

"Cyclanilide" means (1-(2,4-dichlorophenylaminocarbonyl)-cyclopropane carboxylic acid).

"DCA" means (2,4 Dichloro aniline).

"Degussa Secrecy Agreement" means the Secrecy Agreement between Aventis and Cedar dated as of November 22, 1999.

"EPA" means the Environmental Protection Agency of the United States and all applicable state agencies responsible for the protection of the environment.

"NaMO" means Sodium Methoxide.

"Non-Strategic Raw Materials" means the following raw materials: xylene, formic acid and caustic soda.

"Party" or **"Parties"** means Aventis and/or Cedar.

"Process" shall mean all the scientific and technical information useful for the production of Product conforming to the Specifications and shall include all related specifications, secret processes, process patents, patent applications, trade secrets, know-how, information on use and choice of equipment and raw materials, process books, quality control plans, pipe and instrument designs, methods of analysis, engineering data, installation plans and operation procedures and shall include all process information disclosed to Cedar by Aventis pursuant to the Secrecy Agreement and pursuant to the Degussa Secrecy Agreement.

"Product" means Cyclanilide.

"Plant" means the chemical manufacturing facility located at West Helena, Arkansas which is owned and operated by Cedar.

"Raw Materials" means DCA, CPDM and NaMO.

"Raw Materials Specifications" means the specifications for the Raw Materials and Non-Strategic Raw Materials attached as Appendix 2 hereto.

"Secrecy Agreement" means the Secrecy Agreement between Aventis and Cedar dated as of May 14, 1999.

"Specifications" means the specifications for the Product set forth in Appendix 3.

"Third Party(ies)" means any person or entity other than a Party or an Affiliate of a Party.

Unless otherwise stated, all clauses and articles referred to herein are clauses and articles of this Agreement.

Article 2. MANUFACTURING

- 2.1** Subject to the terms and conditions of this Agreement, Cedar hereby agrees to use the Process and any manufacturing or other information and the Raw Materials supplied to it hereunder by or on behalf of Aventis exclusively to supply Product to Aventis and shall not use such Process or information or Raw Materials to supply any entity other than Aventis or its Affiliates with Product. Cedar may not delegate, transfer or sub-contract any of its duties and obligations hereunder without the prior written consent of Aventis. If Aventis consents to such a delegation, transfer or sub-contract, Cedar shall remain liable for all such duties and obligations so delegated, transferred or sub-contracted.
- 2.2** Cedar shall perform the manufacturing operations contemplated hereunder at the Plant.
- 2.3** Aventis shall provide reasonable technical assistance to Cedar during startup of the initial campaign.

Article 3. MATERIALS

3.1 Raw Materials

- (a) Aventis or its nominee shall be responsible for supplying Cedar, at Aventis' cost and delivered to the Plant, with such amounts of Raw Materials meeting the Raw Materials Specifications, as are requested by Cedar in writing during the term of this Agreement, which Cedar shall require in order to enable Cedar to produce, in campaigns scheduled in accordance with the provisions of Article 5, all quantities of Product ordered by Aventis which have been the subject of a firm order as described in Article 5.1. Cedar shall provide Aventis with prior written notice three months in advance of the requested delivery date for any such Raw Materials.

- (b) The Raw Materials shall remain the property of Aventis until physically transformed into the Product and Cedar shall be responsible for paying Aventis the replacement cost of such Raw Materials if such Raw Materials are damaged after delivery to Cedar. Cedar shall reimburse Aventis for all of Aventis' costs in supplying Raw Materials to Cedar, if such Raw Materials are used by Cedar to produce Product, which due to Cedar's negligence or failure to follow the Process, does not meet the Specifications.
- (c) The Raw Materials remaining in the possession of Cedar on the effective date of termination or expiration of this Agreement shall, at Aventis' option, be returned to Aventis at Aventis' cost, unless such termination is a prior termination due to the condition or conduct of Cedar, in which case the cost shall be for Cedar.
- (d) If Cedar is able to obtain a more favorable price than Aventis for purchase of NaMO, following prior approval from Aventis, Cedar shall purchase and supply such quantities of NaMO as shall be required for it to perform hereunder and such NaMO shall be treated as a Non-Strategic Raw Material as described herein.

3.2 Non-Strategic Raw Materials

Cedar shall supply the Non-Strategic Raw Materials. In all cases, Cedar shall use a reasonable competitive purchasing process. Non-Strategic Raw Materials shall meet the Raw Materials Specifications given in Appendix 2. Cedar may not use Non-Strategic Raw Materials which do not meet the Raw Materials Specifications, unless Aventis has given its prior written consent.

3.3 Storage

Cedar shall maintain all inventories of Raw Materials, Non-Strategic Raw Materials and Product in good condition.

Article 4. MANUFACTURE

4.1 Production

Cedar shall, using the Process, manufacture Product which complies with the Specifications.

4.2 Specifications, Compliance

Cedar warrants that the Product shall be manufactured at all times in conformity with the Specifications and all applicable laws and regulations and registration requirements, and that all required records will be maintained in compliance therewith. Cedar warrants that the Product shall be free of any impurities resulting from the use of equipment used to manufacture Product for any other use (cross-contamination), unless Aventis has accepted such levels of impurities pursuant to Article 4.5(g) below. Cedar makes no other warranty with respect to Product hereunder, including warranties of merchantability or fitness for a particular purpose, and none shall be implied.

4.3 Retention of Samples and Records

Cedar shall maintain representative samples of the Product from each production batch for a minimum period of three (3) years. Upon request of Aventis, Cedar shall make available such retained samples to Aventis. Cedar shall also maintain production records which shall be accessible to Aventis for inspection in accordance with Article 4.4 below. Production reports shall be kept by production batch for three (3) years after production. Analytical reports of the annual production process shall be forwarded to Aventis upon its request.

4.4 Audits and Reports

On or before the 25th of each month during the term of the Agreement, Cedar shall provide Aventis with a report on the inventories, consumption and deliveries of Raw Materials and Non-Strategic Raw Materials and the manufacture, inventories and delivery of Product. Aventis shall have the right to make or have its independent auditors made an inventory audit (either physical or book inventory, or both) of the Product and Raw Materials and Non-Strategic Raw Materials, in progress and finished, from time to time, with advance notice to Cedar and at such time during Cedar's regular business hours as it may reasonably elect, and the auditors shall have access to Cedar's facilities and books and records which are relevant to this purpose. Aventis shall also have the right to audit or have audited, all invoices and documentation evidencing Cedar's costs for purchase of Non-Strategic Raw Materials.

4.5 Quality Control.

- (a) Cedar shall weigh and assay the Raw Materials sent to Cedar by Aventis for use in manufacturing the Product. Cedar's acceptance of Raw Materials delivered hereunder shall be a waiver by Cedar of claims with respect to deliveries which are damaged or do not conform to the Raw Materials Specifications unless Aventis receives notice of such a claim within thirty (30) days of delivery (or if such damage or non-conformity could not be discovered in the course of a reasonable incoming inspection, Cedar shall have the right to give notice within ninety (90) days of discovery thereof). Aventis shall replace such Raw Materials in a timely manner so as not to interfere with the production of the Product and shall be responsible for the cost of returning the non-conforming Raw Materials to Aventis.
- (b) Cedar shall perform in-process quality control for the Product as set forth in the Process, which Process shall include a quality control plan. The quality control assays shall be done in accordance with laboratory practices as required by the EPA. Cedar may perform other types of quality control for the Product as it deems necessary and advisable. Aventis may, at its discretion, spot sample and analyse the Raw Materials, Non-Strategic Raw Materials and Product. Aventis may spot sample all batches during the first campaign.
- (c) For so long as Cedar's laboratories remain certified by Aventis, Aventis will accept and take delivery of the Product on the basis of Cedar's certificates of analysis for each batch which shall accompany such deliveries. Aventis' acceptance of Product delivered hereunder shall be a waiver by Aventis of claims with respect to deliveries which are damaged or do not conform to the Specifications unless Cedar receives notice of such a claim within thirty (30) days following receipt of certificates of analysis by Aventis (or

if such damage or non-conformity could not be discovered in the course of a reasonable incoming inspection, Aventis shall have the right to give notice within ninety (90) days of discovery thereof).

- (d) Any dispute arising between the Parties as to whether a shipment lot of Product conforms with the Specifications shall be resolved by reference to the analytical methods identified in Appendix 3. If a shipment lot of Product manufactured hereunder is found not to conform with the Specifications, Cedar shall, at its expense, at the election of Aventis, either replace such non-conforming Product with conforming Product, reformulate the shipment lot to meet the Specifications, or reimburse Aventis for all of Aventis' costs relating to such Product. Should there be any disagreement between Cedar and Aventis, the Parties shall meet and negotiate in good faith and failing agreement within a period of ninety (90) days, either Party may submit the matter to the binding arbitration procedures described in Article 13 hereof.
- (e) Cedar shall inform Aventis of any unexpected deviation(s) from the operating conditions as they may have an adverse impact on the quality of the Product, even if the Product conforms to the Specifications. The Parties shall jointly examine the consequences of such deviation(s). Cedar shall not ship any such quantities of Product without the prior consent of Aventis.
- (f) Upon reasonable notice, Aventis shall have the right to have its authorised representative(s) present at the Plant to observe the manufacture of the Product and inspect the conditions of storage of the Product, Raw Materials and Non-Strategic Raw Materials. The presence of Aventis' representatives shall not relieve Cedar from any liability or of its duties or obligations under this Agreement.
- (g) Should Cedar wish to use any equipment involved in the manufacture of Product for any other production, Cedar shall identify and quantify for Aventis all resulting potential impurities in the Product which could thereby be introduced. Upon receipt of such information, Aventis will set the ARIL (Acceptable Residual Impurities Level), which Cedar shall thereupon be required to follow. If Cedar is prevented from providing Aventis any of the information described above for valid reasons arising from its contractual commitments to another client, Cedar shall provide Aventis with a contact within the other client's organization so that Aventis may seek to obtain such information.

4.6 Handling and Storage

Cedar shall provide and maintain sufficient facilities for the safe storage of the Raw Materials, the Non-Strategic Raw Materials and the Product. Cedar shall provide Aventis with a completed receiving report form upon Aventis' request. Cedar shall preserve and protect the Raw Materials, Non-Strategic Raw Materials and the Products from contamination, loss, theft, substitution, damage, degradation or destruction and shall under no circumstances use the Raw Materials or Non-Strategic Raw Materials for any purpose other than manufacture of the Product.

4.7 Insurance

Cedar shall insure the Raw Materials, Non-Strategic Raw Materials, work-in-process, and the Product against loss, damage and the like, and shall ensure that it has insurance coverage sufficient to fully insure it against all liability which it might incur in the course of performance of this Agreement. At the request of Aventis, Cedar will provide Aventis with evidence that it has subscribed to the insurance policies contemplated hereby with a reputable insurance company acceptable to Aventis, which insurance policies shall in no way exonerate or reduce Cedar's liability hereunder.

Article 5. SCHEDULING, FEE

5.1 Scheduling

Aventis shall submit its good faith estimate of its orders for Product to be produced by Cedar in each calendar year during the term of the Agreement by no later than July 1 of the previous calendar year, provided that such estimate will be for the purpose of facilitating scheduling of manufacture only and will not be binding, provided that a firm order will be issued by Aventis by October 31 of such year, which order shall specify the delivery date(s) for the Product.

5.2 Manufacturing Fee

- (a) Cedar's manufacturing fee for production of Product for Aventis during the Initial Term as defined in Article 10.1 of this Agreement shall be \$8.00 per kilogram for all Product ordered. The fee set forth above includes all amounts relating to the depreciation of the Capital Improvements referred to in Article 6 below. Commencing with the calendar year 2003 and each calendar year thereafter, the fees set forth above may be adjusted to reflect increases in manufacturing costs according to the escalation formula set forth in Appendix 4 hereto.
- (b) Notwithstanding any other term hereof, following the production campaign starting in November 2001, if Cedar determines that it is not able to manufacture Product for \$8.00 per kilogram either because: (i) Cedar has reasonably demonstrated to Aventis that the Plant can not produce on average 1.5 metric tons of acceptable Product per day; or (ii) Cedar has reasonably demonstrated to Aventis that it is unable to use the Process to manufacture Product which complies with the Specifications with a recycling rate (i.e., rate of non-conforming Product which needs to be treated to conform to the Specifications) of ten percent (10%) or less, then Cedar shall promptly communicate to Aventis a new proposed manufacturing fee for production of Product for Aventis. Aventis shall be entitled, in its sole discretion, to accept or reject such new manufacturing fee proposed by Cedar.
- (c) Cedar shall invoice Aventis at the end of each month during the term of the Agreement for all quantities of Product delivered during such month, which deliveries shall be Ex Works Plant as such term is used in the Incoterms 2000, at the applicable manufacturing fee, and for all Non-Strategic Raw Materials (including NaMO if purchased by Cedar pursuant to the terms hereof) purchased by Cedar hereunder and

used to manufacture such quantities of Product. Such invoices shall be due and payable by Aventis thirty (30) days from date of invoice. Cedar shall load the Product into the carrier selected by Aventis.

5.3 Product

- (a) Aventis shall order and Cedar shall produce from Raw Materials supplied by Aventis not less than seven hundred ninety (790) metric tons of Product during the Initial Term as defined in Article 10.1 of this Agreement. For indicative purposes, Aventis' current estimate of its yearly requirements for the Product is one hundred fifty (150) metric tons per year, provided that such figure is provided for information purposes only and will not be binding.
- (b) The Parties hereby agree that Aventis shall order and purchase, and Cedar shall produce, at least one hundred forty (140) metric tons of Product to be produced by Cedar in a production campaign which will start in November 2001. For the avoidance of doubt, Cedar's manufacturing fee for production of such Product shall be \$8.00 per kilogram.
- (c) In the event Aventis shall not have ordered and purchased from Cedar pursuant to the Agreement, at least one hundred and twelve (112) metric tons of Product during 2002 and in each calendar year of the Initial Term thereafter, then Aventis shall pay an amount equal to \$8.00 multiplied by the difference between one hundred and twelve (112) metric tons and the amount of Product ordered and purchased, provided however, that any such amounts paid by Aventis will be credited as a prepayment for any Product to be delivered in the following calendar year of the Initial Term in excess of one hundred and twelve (112) metric tons.

If during 2002 or any calendar year of the Initial Term thereafter, Aventis orders and purchases an amount of Product which exceeds one hundred and twelve (112) metric tons, such excess shall be credited towards, and shall thereby reduce, Aventis' commitment in respect of the one hundred and twelve (112) metric tons of Product for the following calendar year of the Initial Term, provided that the credit will be limited to twenty-eight (28) metric tons.

- (d) The Product shall be packaged and labelled by Cedar in accordance with the Specifications.

5.4 Raw Material Usage

Maximum usage factors applicable to consumption of Raw Materials (expressed in kilograms of Raw Materials consumed per kilogram of Product) and Non-Strategic Raw Materials (expressed in kilograms of Non-Strategic Raw Materials consumed per kilogram of Product) shall be determined by mutual agreement of the Parties based on actual results achieved during the production campaign starting in November 2001. Thereafter, any over-consumption of Raw Materials or Non-Strategic Raw Materials (of more than 3.5%) shall be for Cedar's account. The savings on any under-consumption of Raw Materials or Non-Strategic Raw Materials of more than 3.5% shall be shared equally by the Parties.

Within thirty (30) days of the end of each campaign during the Initial Term and any extension of the Initial Term, Cedar will prepare and provide Aventis with a statement of consumption of Raw Materials and Non-Strategic Raw Materials, accompanied by documentation demonstrating Cedar's costs for such Non-Strategic Raw Materials. Upon receipt thereof, Aventis will provide Cedar with a statement of its cost for such Raw Materials. Within thirty (30) days of receipt of such statement from Aventis, the Party owing compensation to the other Party pursuant to this Article 5.4 will pay the other Party all amounts so due. The Parties may, by mutual agreement, decide that any such amounts will be taken into account in the next invoice for Product delivered to Aventis.

5.5 Wastes

Cedar shall be solely responsible for disposal of all wastes (including without limitation, solid, liquid and hazardous materials and wastes, as the same may be defined by the EPA and any regulations issued pursuant to laws regulating the environment) generated in connection with the manufacturing operations contemplated hereby, and agrees to comply with all applicable laws, rules and regulations pertaining to the generation, storage, transport and disposal of such wastes. Cedar agrees to minimize the generation of wastes associated with manufacturing of the Product and shall recycle, use or dispose of such wastes in approved off-site facilities as directed from time to time by Aventis. Failure by Cedar to handle wastes in accordance with these provisions shall be deemed to be a material breach of this Agreement. Aventis shall reimburse Cedar for off-site waste disposal, provided that the waste disposal charge to Aventis shall not exceed \$ 1.25 per kilogram of Product, provided that in the event new governmental regulations are promulgated which prohibit Cedar from disposing of manufacturing wastes in the same manner as during the calendar year 2000, the Parties shall make their best efforts to reach agreement on a revised cap for off-site waste disposal costs per kilogram of Product. Cedar shall be solely responsible for any liability resulting from the violation of any environmental law as a result of Cedar's performance hereunder, and shall indemnify Aventis against any claims against Aventis or its Affiliates by any Third Party, including any public authority, in respect of any such violation.

Article 6. CAPITAL IMPROVEMENTS

As set forth in Appendix 1, Cedar's cost of Capital Improvements is \$ 751 000. This cost will be amortized over the first seven hundred ninety (790) metric tons of Product to be produced by Cedar and paid for by Aventis during the Initial Term of the Agreement. Accordingly, \$ 0.95 for each kilogram of Product purchased by Aventis from Cedar hereunder shall be credited to Aventis' obligation to reimburse Cedar's cost of Capital Improvements. If Cedar has not been totally reimbursed for this agreed cost of the Capital Improvements upon expiration of the Initial Term on December 31, 2006, Aventis shall be responsible for reimbursing Cedar the balance of this agreed cost by December 31, 2006. If this Agreement is terminated for reasons other than for default by Cedar prior to the end of the Initial Term, the remaining portion of this agreed cost (to the extent incurred and unamortized) shall be paid in full by Aventis to Cedar upon the occurrence of such termination.

Article 7. TITLE AND RISK OF LOSS

Title to the Raw Materials supplied by Aventis to Cedar pursuant to this Agreement and to the Product manufactured by Cedar for Aventis pursuant to this Agreement shall at all times be in, and remain in, Aventis. Risk of loss, theft, degradation, substitution, contamination, destruction or damage of the Raw Materials, the Non-Strategic Raw Materials and the Product shall be borne by Cedar until delivered to Aventis as provided herein. Aventis shall bear the risk of loss, theft, degradation, substitution, contamination, destruction or damage to the Product after the Product is loaded onto the carrier designated by Aventis.

Article 8. CONFIDENTIALITY

- 8.1** Cedar shall keep secret and confidential all Process and Product information and other proprietary and technical information communicated in any form whatsoever by Aventis to Cedar from time to time in connection with this Agreement, and any information derived therefrom (collectively, the "Confidential Information"), and shall not disclose such Confidential Information, in whole or in part, to any Third Party. Cedar shall disclose the Confidential Information to its personnel on a strict need to know basis and shall not use the Confidential Information for any purpose other than the performance of the Agreement. This obligation of secrecy and non-use shall continue after the expiration or termination of this agreement for a period of 10 (ten) years.
- 8.2** The foregoing commitments shall not apply, however, to any part of such Confidential Information, which:
- (i) was known to the public or generally available to the public prior to the date of disclosure by Aventis,
 - (ii) becomes known to the public or generally available subsequently to the date of disclosure by Aventis through no act or failure to act on the part of Cedar or its Affiliates, or
 - (iii) Cedar can establish by adequate proof was received in good faith by Cedar from a Third Party having a bona fide right to disclose or make available such Confidential Information to Cedar.
- 8.3** The said Confidential Information shall not be deemed to be within one of the foregoing exceptions if it is merely embraced by more general information available in the public domain or in Cedar's possession. In addition, any combination of features shall not be deemed to be within the foregoing exceptions merely because the individual features are in the public domain or in Cedar's possession.
- 8.4** Cedar shall return promptly to Aventis, upon termination of the Agreement or upon Aventis' request, all of the Confidential Information and any documents, drawings, electronic media or other material containing or derived from the Confidential Information.

8.5 The contents of this Agreement may not be disclosed to any Third Party without the prior written consent of both Parties. Should a Party desire to make a communication to a Third Party or to the public regarding the transaction contemplated by the Agreement, such Party must first receive the prior written approval of the other Party.

Article 9. INDEMNIFICATION

9.1 Indemnification of Aventis.

Cedar shall defend, indemnify and hold harmless Aventis, its directors, officers, employees, agents and Affiliates, from and against all claims, actions, proceedings, demands and all liabilities, losses, damages, fines, penalties and expenses (including without limitation, reasonable attorney and consultant expenses) and all direct, special, indirect and consequential loss, damage or expense, whether or not made by a Third Party, which are caused by or arise out of, or in connection with (i) its manufacturing of the Product, including disposal of wastes therefrom; (ii) storing or handling of the Raw Materials or Non-Strategic Raw Materials or the Product; or (iii) the negligent or intentional acts or omissions or the breach of any warranty or agreement made herein or of this Agreement by Cedar, its employees, agents or Affiliates, except to the extent that such claims are caused by Aventis' negligence, fault, omission or conduct or Aventis' breach of any warranty made herein or of this Agreement.

9.2 Indemnification of Cedar.

Aventis shall defend, indemnify and hold harmless Cedar, its directors, officers, employees, agents and Affiliates, from and against all claims, actions, proceedings and demands and all liabilities, losses, damages, fines, penalties and expenses (including without limitation, reasonable attorney and consultant expenses) and all direct, special, indirect and consequential loss, damage or expense, whether or not made by a Third Party, which are caused by or arise out of, or in connection with (i) the transporting, storing, handling or use of Product after such Product has been delivered to Aventis, and (ii) the negligent or intentional acts or omissions or the breach of any warranty or agreement made herein or of this Agreement by Aventis, its employees, agents or Affiliates, except to the extent that such claims are caused by Cedar's negligence, fault, omission or conduct or Cedar's breach of any warranty made herein or of this Agreement.

Article 10. TERM AND TERMINATION

10.1 Term

The initial term of this Agreement (the "Initial Term") shall be from the Effective Date through December 31, 2006. Thereafter, the term of the Agreement shall be renewed for successive two year periods unless terminated by either Party upon notice to the other not less than one (1) year prior to the end of the Initial Term or one year prior to

the end of any extension of the Initial Term of Agreement; provided that this Agreement shall not be so extended unless, prior to the end of the Initial Term or of any extended term, the Parties will have negotiated and reached mutual agreement in respect of the terms of such extension (including the price and quantity).

10.2 Prior Termination

- (a) Either Party may terminate this Agreement before the expiration of the Initial Term or the extended term by written notice to the other Party if:
 - (i) the other Party goes into bankruptcy or insolvency; or
 - (ii) the other Party (including any of its Affiliates) commits a material breach of its obligations under this Agreement and fails, within one month from notice of such breach to remedy the same (if capable of remedy) or (if incapable of remedy) to pay adequate compensation therefor.
- (b) Aventis shall have the right to terminate this Agreement by written notice with immediate effect if Cedar or any of its Affiliates uses the Confidential Information for purposes other than those specified herein.
- (c) Aventis shall have the right to terminate this Agreement immediately, with no further liability thereafter, except as provided in Article 6 of this Agreement, in the event that it decides to withdraw the Product from the market or if Aventis' business relating to the Product is sold or transferred to a Third Party.
- (d) This Agreement shall be terminated automatically with no further liability thereafter, except as provided in Article 6 of this Agreement, if following the production campaign starting in November 2001, Cedar proposes to Aventis a new manufacturing fee for production of Product for Aventis pursuant to Article 5.2(b) above and Aventis decides not to accept such new manufacturing fee.

10.3 Non-exclusive Remedy

The right of a Party to terminate this Agreement in the event of a breach hereof by the other shall not be an exclusive remedy for such breach, and such Party shall be entitled, in addition, to any damages or remedy available under applicable law.

10.4 Accrued Obligations

Neither the expiration nor any termination of this Agreement for whatever cause shall affect the rights or obligations of either Party which have accrued as of the date of such expiration or termination, nor shall it affect any rights or obligations of either Party under this Agreement which are intended by the Parties to survive such expiration or termination.

Article 11. CONSEQUENCES OF TERMINATION

- 11.1** In the event of termination or expiration of this Agreement for any reason whatsoever, without prejudice to any legal or equitable rights or remedies of either Party, the following actions shall be taken:
- (a) Cedar shall immediately interrupt the manufacture of the Product and immediately return to Aventis the Confidential Information and all information relating to the Process and any other data or information it shall have received from Aventis during the term of this Agreement relating to the Product, or which is derived therefrom, and Cedar shall make no further use thereof without the written consent of Aventis.
 - (b) The Parties shall continue to observe the provisions of Articles 4.3, 5.4, 8, 9, 11 and 13 hereto, which shall remain in full force and effect.
 - (c) Aventis shall have the option, in its sole discretion, to purchase from Cedar, at the then applicable manufacturing fee, any inventory of Product in usable or merchantable condition.
 - (d) Upon termination or expiration of this Agreement, Cedar will have no right to any compensation for cleaning or decontamination of its installations used to produce Product hereunder. Upon reasonable notice, Aventis shall have the right to have its representatives audit such cleaning or decontamination. The presence of any such representatives shall not relieve Cedar from any liability, duties or obligations in respect thereof.

Article 12. FORCE MAJEURE

- 12.1** Neither Party shall be liable for its delay in performing or failure to perform hereunder as a result of any contingency beyond its reasonable control, including but not limited to acts of God, fires, floods, wars, civil insurrection, sabotage, accidents, lockouts, labour disputes or shortages, any governmental laws, ordinances, rules, regulations, bans, action or inaction (such contingency herein referred to as a "Force Majeure").
- 12.2** The Party pleading circumstances of Force Majeure shall notify the other Party of the existence of such delay immediately and shall also notify the other Party as soon as the circumstances giving rise to such Force Majeure have abated. The Parties' obligations hereunder shall be suspended for the duration of any Force Majeure and shall resume upon termination of the Force Majeure, in accordance with the terms of this Agreement.

Article 13. ARBITRATION; APPLICABLE LAW

13.1 Method and Location

All disputes arising in connection with the present Agreement shall be finally settled under the rules of Arbitration of the International Chamber of Commerce by one or more arbitrators appointed in accordance with the said Rules. The arbitration shall be conducted in the English language in New York City.

13.2 Applicable Law

This Agreement shall be construed in accordance with and governed by the laws of the State of New York.

Article 14. IMPROVEMENTS

14.1 The Parties hereby agree that nothing contained herein shall be construed as granting any right to Cedar relating to the Process and Product information or any other proprietary and technical information communicated by Aventis to Cedar other than for Cedar to manufacture Product for Aventis in accordance with the terms and conditions hereof.

14.2 Cedar shall immediately notify Aventis of any know-how, improvement or patentable discovery resulting from Cedar's performance under this Agreement. Any such know-how, improvement or patentable discovery shall be the exclusive property of Aventis, which may file for patent protection thereon in its own name and at its own cost. Cedar hereby assigns its rights on such know-how, improvements or patentable discoveries to Aventis and will cause its employees to do the same if necessary. At the request and expense of Aventis, Cedar will provide any assistance and information required by Aventis to file any such patent application.

Article 15. REGULATORY COMPLIANCE, PRODUCT INFORMATION

15.1 Cedar shall manufacture Product for and on behalf of Aventis in accordance with all applicable laws and regulations, including all applicable health, safety and environmental laws and regulations, and shall keep such records as may be required thereunder. Cedar acknowledges that it has inspected and tested the Process and affirms that it has all technical expertise necessary to: (i) install and operate the equipment described in the Process in a safe and sound manner; and (ii) use the Process to produce Product without causing damage to persons, equipment or the environment.

15.2 Cedar represents and warrants to Aventis that it has obtained all permits, authorizations and licenses necessary for its performance of the operations contemplated herein and the use of the Plant as contemplated hereby, and hereby agrees to comply with all provisions thereof and to maintain and obtain all renewals, reapplications and modifications of all permits, authorizations and licenses necessary or required for such operations.

15.3 Cedar shall ensure that its procedures and means meet appropriate regulatory requirements governing the handling, stocking, labeling and transport of Raw Materials, Non-Strategic Raw Materials and Product and shall observe any recommendations and instructions that Aventis shall communicate to Cedar in respect of the safe manufacture of the Product, handling and use of the Product and the Raw Materials and Non-Strategic Raw Materials, as well as health and protection of the environment.

Article 16. EXCLUSION OF AGENCY, RELATIONSHIP OF THE PARTIES

Each Party hereunder is an independent contractor and neither Party is authorized or empowered to act as agent for the other Party for any purpose, and shall not on behalf of the other Party enter into any contract, undertaking or agreement of any sort or make any promise, warranty or representation.

Article 17. ASSIGNMENT

Neither Party may transfer or assign this Agreement to any Third Party without the prior written consent of the other Party.

Article 18. HEADINGS

The headings to the clauses of this Agreement are for the convenience of reference only, do not form part of this Agreement and shall not in any way affect the construction hereof.

Article 19. NOTICES

19.1 All notices or communications required or permitted to be given under this Agreement shall be in writing in English and shall be valid and sufficient if dispatched by personal delivery, by registered airmail, return receipt requested, or facsimile transmission, and shall be deemed to have been given or made when personally delivered, or when received as evidenced by return receipt or confirmation of facsimile transmission, and addressed to the respective addresses as first indicated herein, for the attention of their respective legal departments.

19.2 Any Party may change its address by a notice given to the other Party in the manner set forth above. Notices given as herein provided shall be considered to have been given fourteen (14) days after the mailing thereof.

Article 20. AMENDMENTS; WAIVERS

No amendment of this Agreement or any provisions or terms thereof shall be binding unless recorded in a written document signed by both Parties. No delay, waiver, omission, or forbearance on the part of a Party to exercise any right, option, duty, or power arising out of any breach or default by the other Party under any of the terms, provisions, covenants, or conditions hereof, shall constitute a waiver by such Party to enforce any such right, option, duty, or power as against the other Party, or operate as a waiver of any subsequent breach or default by the other Party.

Article 21. ENTIRE AGREEMENT; SURVIVAL

This Agreement, including the Appendices hereto, sets forth the entire understanding and agreement between the Parties with respect to the subject matter hereof, and cancels and supersedes all previous agreements, promises, representations and understandings, written or oral, between the Parties with respect to the subject matter hereof, including the MOU.

Article 22. SEVERABILITY

If any provision(s) of this Agreement shall, to any extent, be held to be invalid, illegal or unenforceable in any given jurisdiction, or any governmental agency or authority shall require the Parties to delete any provision of this Agreement as a condition of validity, legality or enforceability of the remainder of this Agreement in any given jurisdiction, such invalidity, illegality, unenforceability or deletion shall not impair or affect the remaining provisions of this Agreement or the validity or enforceability of such provision in any other jurisdiction. The Parties shall endeavor through good faith negotiations to replace the invalid, illegal, unenforceable or deleted provision by valid provisions the economic effect of which comes as close as legally possible to that of the invalid, illegal, unenforceable or deleted provision.

IN WITNESS WHEREOF, the Parties hereto have caused this Agreement to be executed by their duly authorised representatives on the day and year set forth below.

**Aventis CropScience Matières
Actives**

Cedar Chemical Corporation

By: Welter
Name: WOLFGANG WELTER
Title: Dr., HEAD OF MANUFACTURING
AND EHS
Date: 22.02.2002

By: _____
Name:
Title:
Date:

- Appendix 1 Capital Improvements
- Appendix 2 Raw Material Specifications
- Appendix 3 Product Specifications
- Appendix 4 Escalation Formula

Appendix 1 Capital Improvements

Cost Estimate Summary : Cyclanilide Campaign

	Labor	Material	Total
• 1.0 Site work			
Subtotal	\$ 8 400,00	\$ 1 000,00	\$ 9 400,00
• 2.0 Civil			
Subtotal	\$ 23 275,00	\$ 11 500,00	\$ 34 775,00
• 3.0 Reactors (Coiled/ Jacketed)			
Subtotal	\$ 25 550,00	\$ 27 600,00	\$ 53 150,00
• 4.0 Vessels/Tanks			
Subtotal	\$ 5 600,00	\$ 10 000,00	\$ 15 600,00
• 5.0 Heat exchangers			
Subtotal	\$ 1 750,00	\$ 18 000,00	\$ 19 750,00
• 6.0 Rotating Equipment			
Subtotal	\$ 6 300,00	\$ 31 000,00	\$ 37 300,00
• 7.0 Filtering Equipment			
Subtotal	\$ 700,00	\$ 6 000,00	\$ 6 700,00
• 8.0 Piping			
Subtotal	\$ 107 940,00	\$ 91 917,50	\$ 199 857,50
• 9.0 Electric/ Instrumentation			

	Labor	Material	Total
Subtotal	\$ 104 860,00	\$ 158 750,00	\$ 263 610,00
• 10.0 Inspection/ Engineering			
Subtotal	\$ 35 000,00	\$ 0,00	\$ 35 000,00
• 11.0 Rentals & 12.0 Miscellaneous			
Subtotal	\$ 840,00	\$ 6 500,00	\$ 7 340,00
SUBTOTAL	\$ 320 215,00	\$ 362 267,50	\$ 682 482,50
Contingency (10 %)	\$ 32 021,50	\$ 36 226,75	\$ 68 248,25
TOTAL	\$ 352 236,50	\$ 398 494,25	\$ 751 000,00

Appendix 2 Raw Material Specifications

a) 2,4 Di Chloraniline Specifications (For Cyclanilide)

1. ANALYTICAL SPECIFICATIONS

Determinations	Methods of analysis	Specifications (g/Kg)	Frequency
• Appearance	Visual	Molten product colourless to brown	each batch
• Solidification point		60° C min.	each batch
• Purity	Gas chromatography	990 min.	each batch
• Water	Karl Fischer	1 max.	each batch
Process Impurities			
- 2,5 Di chloraniline	Gas chrom.	2 max.	each batch
- 2,6 Di chloraniline	Gas chrom.	1 max.	each batch
- 3,4 Di chloraniline	Gas chrom.	1 max.	each batch
- Others impurities (sum)	Gas chrom.	3 max. (1 max for each)	each batch
- Chlorides		100 ppm max.	

2. PACKAGING

- Steel drum for liquid product.

b) CDM Specifications

1. ANALYTICAL SPECIFICATIONS

Determinations	Methods of analysis	Specifications
• Purity	GC / MS	min. 97,50 %
• Dimethylmalonate	GC / MS	max. 1,00 %
• Dimethylformamide	GC / MS	max. 0,75 %

c) Sodium Methylate Specifications Solution 30 % in Methanol

1. ANALYTICAL SPECIFICATIONS

Determinations	Methods of analysis	Specifications
• Total alkalinity calculated as : NaOCH ₃	Titration	29,5 % - 31,0 % 29,5 % - 30,5 %
• NaOCH ₃ content	Titration	Max 0,5 %
• Na ₂ CO ₃ + NaOH content	ISO 6271	Max 30 APHA
• Color		

Appendix 3 Product Specifications

Cyclanilide Specifications

1. ANALYTICAL SPECIFICATIONS

Determinations	Methods of analysis	Specifications (g/Kg)	Frequency
• Appearance	Visual	White to yellowish flowing powder	each batch
• CYCLANILIDE content	C.817.06.95	960 min.	each batch
• Water	CIPAC MT 30.1	5 max.	each batch
• Total alkyl aromatics : as o, p, m xylène, and ethyl benzene	C.816.06.95	1 max.	each batch
Process Impurities :			
- RPA 116741 (imp.A)	C.821.07.95	3 max.	each batch
- 2,4 Dichloroaniline	C.821.07.95	1 max.	each batch
- RPA 090 945	C.821.07.95	10 max.	each batch
- RPA 111 030	C.821.07.95	10 max.	each batch
- RPA 114 924	C.821.07.95	15 max.	each batch
- RPA 093 903	C.821.07.95	1 max.	each batch
- RPA 090 899	C.821.07.95	1 max.	each batch

Cross contamination prevention :

All possible impurities from the implementation of an other production in the equipment involved in manufacturing of Cyclanilide, must be identified and quantified.

2. PACKAGING

- Polyéthylène drums : 120 l.
- Net weight : 50 Kg of Cyclanilide

Appendix 4 Escalation Formula

Application commencing in 2003

$$P_{n+1} = P_n \left[0,15 + 0,425 \frac{W_{n+1}}{W_n} + 0,425 \frac{PPI_{n+1}}{PPI_n} \right]$$

- P_{n+1} = Adjusted toll fee for the contract year in \$ / Kg of Cyclanilide.
- P_n = Toll fee of the previous contract year in \$ / Kg of Cyclanilide.
- W_{n+1} = Employment Cost Index published by the US Bureau of Labor Statistic available the month of December preceding the date of adjustment.
- W_n = Employment Cost Index of the previous contract year.
- PPI_{n+1} = Producer Price Index, for the available month of December preceding the date of adjustment :
 - Industry and Product : Industrial Organic Chemical, Code 286.
 - Subcategory : Agricultural Chemical, nbc, other pesticidal preparations primarily for agricultural, Code 2879 - 8.
- PPI_n = Producer Price Index of the previous contract year.

RAW MATERIAL RECEIVING RECORD No. 20236

CEDAR CHEMICAL 9000-1 REV: C

TIME IN AT GATE
0700

RECEIVED BY
S. White

SECTION 1

DATE	ORDER NO.	CAR OF TRUCK NO.	DECLARED WEIGHT
4-29-08	661405	760 / 6006	Net NA

SHIPPER	CARRIER
Tian Carrier	Trans Carrier

QUANTITY	CONTAINER	DESTINATION	RAW MAT CODE #	DESCRIPTION
480	Box	Unit 7	NA	Cyclanitol Drums

COMMENTS

SECTION 2

RECIPIENT	TIME SAMPLE/CERTIFICATE TAKEN TO LAB

UNLOADED AT (tank number, unit, warehouse, etc.)

COMMENTS

SECTION 3

LAB TECHNICIAN	ACCEPT	REJECT	REASON FOR REJECTION

COMMENTS

SECTION 4

SHIFT SUPERVISOR	ACCEPT	REJECT	REASON FOR REJECTION

PLANT WEIGHT	UNLOADING TIMES	
NET	START TIME	END TIME

COMMENTS

PACKING SLIP

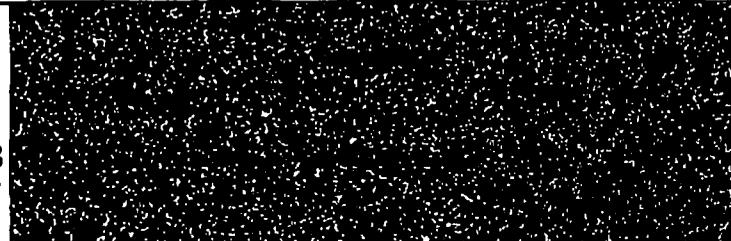
FROM: **Russell-Stanley**
An Industrial Container Supply Chain Management Company

PAGE **192562**
AT: 356 W. 19th St., Reserve, LA 70084
(504) 636-4200

BILL OF LADING #
239044

04/24/02	TRANS CAR	6006		THIRD PARTY
----------	-----------	------	--	-------------

SHIP TO:
102228 0000
AVENTIS CROP SCIENCE/CEDAR
49 PHILLIPS ROAD # 311
HELENA, AR 72342 US
CEDAR CHEMICAL CORPORATION



239044 **661405** **C.O.D. \$** **AND REMIT TO:
356 W. 19th St.
Reserve, LA 70084**

480	03004E0UDX SHIP EXACT COUNT OF 480 DRUMS. SHIP VIA TRANS CARRIERS. BILL THIRD PARTY FREIGHT. TO: AVENTIS CROPSCIENCE USA LP PO BOX 13985, RESEARCH TRIANGLE PARK, NC 27709	POLYDRUM 30G DELEX OPEN EURO BLU	5280 .000
		SEAL# 0051184	5280 .000

If the shipment moves between two ports by a carrier by water, the law requires that the bill of lading shall state whether it is carrier's or shipper's weight.
NOTE: Where the rate is dependent on value, shippers are required to state specifically in writing the agreed or declared value of the property.
The agreed or declared value of the property is hereby specifically stated by the shipper to be not exceeding _____ per

This is to certify that the above named materials are properly classified, described, packaged, marked and labeled and are in proper condition for transportation according to the applicable regulations of the Department of Transportation.

Carrier is responsible to notify Russell-Stanley immediately of any alteration of this document to (504) 636-4200 to the Traffic Mgr.

CERTIFICATE OF CONFORMANCE
This certifies that all Non-removable head (UN 1H1, UN 1A1 and 3H1) and Removable head (UN 1H2 and 1A2) drums, manufactured by RUSSELL-STANLEY CORP. in accordance with the standards set forth in Part 178 Subpart L - Non-bulk Performance Oriented Packaging Standards - of Title 49 Code of Federal Regulations - Transportation (current edition) and subsequent revisions appearing in the Federal Register during current calendar year have been successfully qualification tested for their respective design types in accordance with the requirements for packaging given in Part 178 Subpart M - Testing of Non-bulk Packagings and Packages - Title 49 CFR and when prepared for shipment using the closures supplied and / or specified and closed as instructed by RUSSELL-STANLEY CORP. are capable of meeting the performance standards indicated by the drum markings applied in accordance with 49 CFR § 178.699. Furthermore, the marking on the drum is certification of this capability as stated in § 178.2 (b), 49 CFR.

Subject to Section 7 of conditions of applicable bill of lading, if this shipment is to be delivered to the consignee without recourse on the Consignor, the Consignor shall sign the following statement:
The carrier shall not make delivery of this shipment without payment of freight and all other lawful charges.
[Signature]
(Signature of Consignor)
If charges are to be prepaid, write on appropriate "To be Prepaid."
Received \$ _____ to _____
apply in prepayment of the charges on the property described herein.

Signed Russell-Stanley Bill of Lading Required For Process of Payment For Carrier.

Plastic Container OTE 156.600 sub# _____

New Steel Drums 55 Gallon Empty. Gauge: _____

Customer Arrival Time 0715 Departure Time 0715
Customer Signature: [Signature] Date: 4-29-02

Russell-Stanley SHIPPER PER _____ Agent, Per _____
Permanent Address of Shipper: 356 W. 19th St., Reserve, LA 70084

Per _____
(The signature here acknowledges only the amount prepaid.)
Charges Advanced \$ _____
Shipper's Impair in lieu of stamp; not a part of bill of lading approved by the Interstate Commerce Commission.
The Fibre Boxes used for this shipment conform to the specifications set forth in the box maker's certificate thereon, and all other requirements of Rule 41 of the Consolidated Freight Classification.

CONSIGNEE DELIVERY RECEIPT

Freight Bill # 202307031 RO TNBR#:		CONSIGNEE AVENTIS CROP SCIENCE/CEDAR 49 PHILLIPS ROAD #311 CEDAR CHEMICAL CORPORATIO HELENA AR 72342		SHIPPER RUSSELL STANLEY CORP 356 W 19TH ST RESERVE LA 70084				
Date: 05/23/2002								
H/U	PCS	DM	DESCRIPTION	WT	NMFC	FCI CLASS	RATE	CHARGES
	110		PO# 659672 POLYDRUM 30G DELEX 002479 FUEL SURCHG LTL SHPT 060CLASSIFICATION CHANGE SHIPMENT OCCUPIED 815 CUBIC FT. DENSITY 1.5 LBS PER CUBIC FT. CUBIC CAPACITY MIN. CHG. APPLIED PER AF RULES TARIFF 125 ITEM 613 SRL INSPECTING TERMINAL 00815 CUBIC FEET APPOINTMENT FROM 09:00 TO 15:00 APPT052802 15:00SETUP052402 12:46 (000)000-0000	1210	156600-02	300		
	110	210	PREPAID - WILL INVOICE THIRD PARTY	1210				
ANY ADDITIONAL SERVICES MAY RESULT IN ADDITIONAL CHARGES* CHARGES SUBJECT TO CHANGE*				B/L # 247721		0.00		
Received by: _____ Date: <u>5/28/02</u> Arrive: <u>1111</u> Depart: _____ Delv. Driver: <u>68</u> Driver #: <u>19831</u>				P.O. # 659672				
<input type="checkbox"/> DELV WITH S/W INTACT # of Skids Delv _____ <input checked="" type="checkbox"/> CLEAR <input type="checkbox"/> SHORT <input type="checkbox"/> OVER <input type="checkbox"/> DAMAGE EXCEPTIONS: _____				 <p>P.O. Box 840, Harrison, AR 72602-0840 (ARFW) Phone: 800-447-8139 Page 1 of 1</p>				

STRAIGHT BILL OF LADING - SHORT FORM - ORIGINAL - NOT NEGGTABLE

RECEIVED, subject to the classifications and tariffs filed tariffs in effect on the date of the issue of this Bill of Lading.

BILL OF LADING #

247721

FROM: **Russell-Stanley**

"An Industrial Container Supply Chain Management Company"

PAGE 1

AT: 356 W. 19th St., Reserve, LA 70084
(504) 536-4200

TICKET DATE	SHIPPED VIA	TRAILER #	DRIVER	SHIPMENT TYPE	SHIP TO
05/28/02	AM FREIGHTWAY	11507	D.		THIRD PARTY

SHIP TO: 102:00 0100
 AVENTIS CROP SCIENCE/CEDAR
 49 PHILLIPS ROAD # 311
 HELENA AR 72342 US
 CEDAR CHEMICAL CORPORATION

R.S. ORDER #	CUSTOMER P.O. #	C.O.D. \$	AND REMIT TO:
247721	619672		356 W. 19th St. Reserve, LA 70084

QUANTITY SHIPPED	PART NUMBER	DESCRIPTION	WEIGHT
AW 110	030041	POLYDRUM 30G DELEX OPEN EURO BLU SHIP EXACT COUNT OF 110 DRUMS. BILL THIRD PARTY FREIGHT: TO: AVENTIS CROPSCIENCE USA LP PO BOX 13985, RESEARCH TRIANGLE PARK, NC 27709	1-10.000
110		SEAL#	.000

*If the shipment moves between two ports by a carrier by water, the law requires that the bill of lading shall state whether it is carrier's or shipper's weight.
 NOTE: Where the rate is dependent on value, shippers are required to state specifically in writing the agreed or declared value of the property.
 The agreed or declared value of the property is hereby specifically stated by the shipper to be not exceeding per

Subject to Section 7 of conditions of applicable bill of lading, if this shipment is to be delivered to the consignee without recourse on the Consignor, the Consignor shall sign the following statement:
 The carrier shall not make delivery of this shipment without payment of freight and all other lading charges.

This is to certify that the above named materials are properly classified, described, packaged, marked and labeled and are in proper condition for transportation according to the applicable regulations of the Department of Transportation.

Carrier is responsible to notify Russell-Stanley immediately of any alteration of this document to 504-536-4200 to the Traffic Mgr

CERTIFICATE OF CONFORMANCE

This certifies that all Non-removable head (UN 1H1, UN 1A1 and 3H1) and Removable head (UN 1H2 and 1A2) drums, manufactured by RUSSELL-STANLEY CORP. in accordance with the standards set forth in Part 178 Subpart L - Non-bulk Performance Oriented Packaging Standards - of Title 49 Code of Federal Regulations - Transportation (current edition) and subsequent revisions appearing in the Federal Register during current calendar year have been successfully qualified for their respective design types in accordance with the requirements for packaging given in Part 178 Subpart M - Testing of Non-bulk Packagings and Packages - Title 49 CFR and when prepared for shipment using the closures supplied and / or specified and closed as instructed by RUSSELL-STANLEY CORP. are capable of meeting the performance standards indicated by the drum markings applied in accordance with 49 CFR § 178.603. Furthermore, the marking on the drum is certification of this capability as stated in § 178.2 (b), 49 CFR.

[Signature]
 (Signature of Consignor)

If charges are to be prepaid, write or stamp here, "To be Prepaid."

Signed Russell-Stanley Bill of Lading Required For Process of Payment For Carrier.

Plastic Container OTE 156.600 sub# _____

New Steel Drums 55 Gallon Empty. Gauge _____

Customer Arrival Time _____ Departure Time _____

Customer Signature: *[Signature]* SLS 11095 Date: _____

Russell-Stanley SHIPPER PER *[Signature]* Agent, Per _____
 Permanent Address of Shipper: 356 W. 19th St., Reserve, LA 70084

Received \$ _____ to _____

apply in prepayment of the charges on the property described hereon.

Agent or Cashier

Per

(The signature here acknowledges only the amount prepaid.)

Charges Advanced \$ _____

† Shipper's imprint in lieu of stamp; not a part of bill of lading approved by the Interstate Commerce Commission.

The Fibre Boxes used for this shipment conform to the specifications set forth in the box maker's certificate thereon, and all other requirements of Rule 41 of the Consolidated Freight Classification.

CONSIGNEE DELIVERY RECEIPT

Freight Bill # 202307031 R0 TNBR#:	CONSIGNEE AVENTIS CROP SCIENCE/CEDAR 49 PHILLIPS ROAD #311 CEDAR CHEMICAL CORPORATIO HELENA AR 72342	SHIPPER RUSSELL STANLEY CORP 356 W 19TH ST RESERVE LA 70084
--	---	---

H/LI	PCS	HM	DESCRIPTION	WGT/LBS	NMFC	FCF CLASS	RATE	CHARGES
	110		PO# 659672 POLYDRUM 30G DELEX 002479 FUEL SURCHG LTL SHPT 060CLASSIFICATION CHANGE SHIPMENT OCCUPIED 815 CUBIC FT. DENSITY 1.5 LBS PER CUBIC FT. CUBIC CAPACITY MIN. CHG. APPLIED PER AF RULES TARIFF 125 ITEM 613 SRL INSPECTING TERMINAL 00815 CUBIC FEET APPOINTMENT FROM 09:00 TO 15:00 APPT052802 15:00SETUP052402 12:46 (000) 000-0000	1210	156600-02		300	0

110 110 PREPAID - WILL INVOICE THIRD PARTY 1210

ANY ADDITIONAL SERVICES MAY RESULT IN ADDITIONAL CHARGES*
 CHARGES SUBJECT TO CHANGE*

Received by: _____
 Date: 5/28/02 Arrive: 114 Depart: _____
 Delv. Driver: JS Driver #: 19871
 DELV WITH S/W INTACT _____ # of Skids Delv
 CLEAR SHORT OVER DAMAGE
 EXCEPTIONS:

B/L # 247721
 P.O. # 659672
 0.00



A FedEx Company
 P.O. Box 840, Harrison, AR 72602-0840 (ARFW)
 Phone: 800-447-8139 Page 1 of 1

STRAIGHT BILL OF LADING - SHORT FORM - ORIGINAL - NOT NEGOTIABLE

RECEIVED, subject to the classifications and liability for tariffs in effect on the date of the issue of this Bill of Lading

BILL OF LADING #

247721

FROM: **Russell-Stanley**

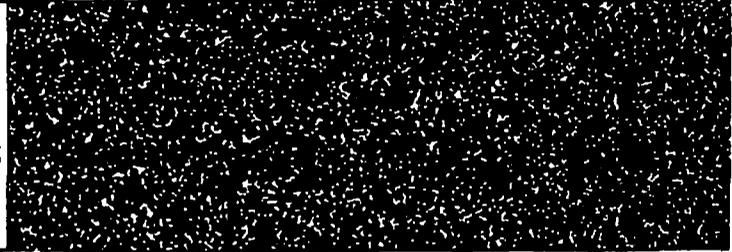
An Industrial Container Supply Chain Management Company

PAGE 1

AT: 356 W. 19th St., Reserve, LA 70084
(504) 536-4200

SET DATE	SHIPPED VIA	TRAILER #	DRIVER	REMARKS	DATE
05/28/02	AM FREIGHTWAY	111-07			THIRD PARTY

SHIP TO:
102... 000
AVENTIS CROP SCIENCE CEDAR
49 PHILLIPS ROAD # 511
HELENA AR 72342 US
CEDAR CHEMICAL CORPORATION



R.S. ORDER # 247721	CUSTOMER P.O. # 619672	C.O.D. \$	AND REMIT TO: 356 W. 19th St. Reserve, LA 70084
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QUANTITY SHIPPED	PART NUMBER	DESCRIPTION	PRICE
110	03004100	POLYDRUM 30G DELEX OPEN EURO BLU SHIP EXACT COUNT OF 110 DRUMS. BILL THIRD PARTY FREIGHT: TO: AVENTIS CROPS SCIENCE USA LP PO BOX 13985, RESEARCH TRIANGLE PARK, NC 27709	1210.000
110		SEAL#	.000

0950 1159

If the shipment moves between two ports by a carrier by water, the law requires that the bill of lading shall state whether it is carrier's or shipper's weight. NOTE: Where the rate is dependent on value, shippers are required to state specifically in writing the agreed or declared value of the property. The agreed or declared value of the property is hereby specifically stated by the shipper to be not exceeding per

Subject to Section 7 of conditions of applicable bill of lading, if this shipment is to be delivered to the consignee without recourse on the Consignor, the Consignor shall sign the following statement:

This is to certify that the above named materials are properly classified, described, packaged, marked and labeled and are in proper condition for transportation according to the applicable regulations of the Department of Transportation.

The carrier shall not make delivery of this shipment without payment of freight and all other lawful charges.

Carrier is responsible to notify Russell-Stanley immediately of any alteration of this document to 504-536-4200 to the Traffic Mgr.

CERTIFICATE OF CONFORMANCE

This certifies that all Non-removable head (UN 1H1, UN 1A1 and SH1) and Removable head (UN 1H2 and 1A2) drums, manufactured by RUSSELL-STANLEY CORP. in accordance with the standards set forth in Part 178 Subpart L - Non-bulk Performance Oriented Packaging Standards - of Title 49 Code of Federal Regulations - Transportation (current edition) and subsequent revisions appearing in the Federal Register during current calendar year have been successfully qualified for their respective design types in accordance with the requirements for packaging given in Part 178 Subpart M - Testing of Non-bulk Packagings and Packages - Title 49 CFR and when prepared for shipment using the closures supplied and / or specified and closed as instructed by RUSSELL-STANLEY CORP. are capable of meeting the performance standards indicated by the drum markings applied in accordance with 49 CFR § 178.503. Furthermore, the marking on the drum is certification of this capability as stated in § 178.2 (b), 49 CFR.

(Signature of Consignor)
If charges are to be prepaid, write or stamp here, "To be Prepaid."

Signed Russell-Stanley Bill of Lading Required For Process of Payment For Carrier.

Received \$ _____ to _____ apply in prepayment of the charges on the property described hereon.

Plastic Container OTE 156.600 sub# _____

New Steel Drums 55 Gallon Empty, Gauge _____

Customer Arrival Time _____ Departure Time _____

Customer Signature: *[Signature]* Date: _____

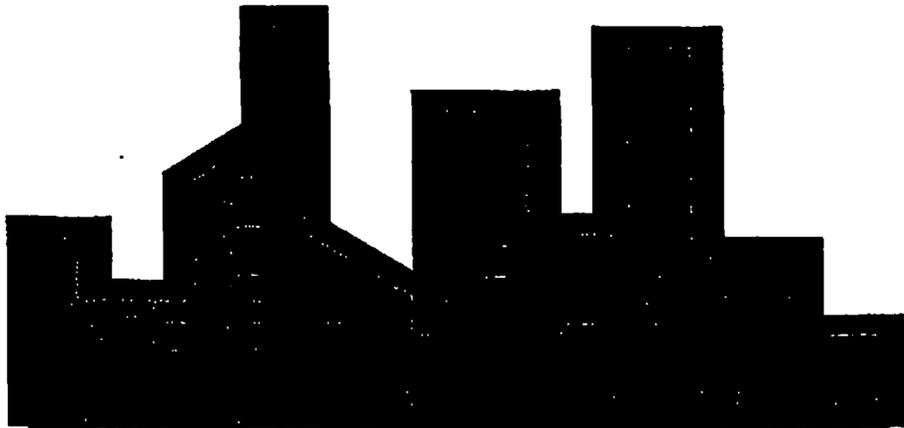
Russell-Stanley SHIPPER PER *[Signature]* Agent, Per _____

Permanent Address of Shipper: 356 W. 19th St., Reserve, LA 70084

Agent or Cashier
Per _____
(The signature here acknowledges only the amount prepaid.)
Charges Advanced \$ _____
Shipper's Imprint in lieu of stamp; not a part of bill of lading approved by the Interstate Commerce Commission.

The Fibre Boxes used for this shipment conform to the specifications set forth in the box maker's certificate thereon, and all other requirements of Rule 41 of the Consolidated Freight Classification.

**ARKANSAS DELTA BIODIESEL
RESEARCH PROJECT**



BIOMASS RESEARCH AND DEVELOPMENT INITIATIVE

031803-001

BY

COMBUSTION TECHNOLOGIES, LLC

HELENA- WEST HELENA/PHILLIPS COUNTY PORT AUTHORITY

LURGI, PSI

ARKANSAS DEPARTMENT OF ECONOMIC DEVELOPMENT

DELTA REGIONAL ENERGY DEVELOPMENT GROUP, INC.

UNIVERSITY OF ARKANSAS DIVISION OF AGRICULTURE

May 15, 2003

TECHNICAL SUMMARY

Combustion Technologies, LLC, Helena-West Helena/Phillips County Port Authority, Lurgi, PSI, Delta Regional Energy Development Group, Inc., Arkansas Department of Economic Development, and the University of Arkansas Division of Agriculture (Applicant) proposes to study the feasibility of providing the economically distressed Eastern Arkansas Mississippi River Delta region with a facility capable of producing up to 30 million gallons of biodiesel annually.

The Applicant will explore:

- 1) The probability that the addition of fuel catalyst, Dipetane, to biodiesel results in a substantial reduction of Nitrous Oxide (NOx)
- 2) Using biodiesel as a carrier oil to replace fossil fuel based products
- 3) Genetically engineering oilseed crop-based biodiesel and examining its environmental performance versus traditional biodiesel when both have the catalyst Dipetane; and
- 4) Creating a prototype facility for retrofitting existing abandoned facilities (brownfield conversions) for the production of biodiesel.

With the requested grant funds the Applicant will conduct a variety of research and activities aimed at completing a biodiesel facility project and providing a fuel which will answer the NOx problem facing the end-users of biodiesel worldwide. Activities will include:

- ❖ Retaining an independent research institute to test product blends on the reduction of NOx by blending the proven fuel catalyst, Dipetane, with biodiesel, and to examine the possibility of using biodiesel as a carrier oil.
- ❖ Conducting an engineering study to assess the benefits of retrofitting an existing, abandoned facility versus building a new facility for the production of biodiesel.
- ❖ Performing a market analysis encompassing all areas pertaining to the sale of biodiesel and its byproducts, including present and future demand and national and international markets.
- ❖ Reviewing federal policy, legislation, benefits, incentives, contracts, permits and all legal issues and funding opportunities pertaining to the use and production of biodiesel.
- ❖ Forming a Farmer's Cooperative to create and operate a grain storage terminal and soybean oil extrusion plant, and to develop an oilseed experimental farm to explore alternative genetically-engineered crop opportunities for biodiesel production.

The planned research and activities will provide the Applicant with the information necessary to successfully complete this innovative biodiesel production project. The facility represents significant advances in rural based biodiesel production, handling, processing and manufacturing, and will double the present biodiesel production in the United States. The economy of Arkansas and specifically its Eastern Delta region- one of the poorest rural areas in the United States- will be greatly enhanced. The facility will create approximately 200 new jobs as well as significant opportunities for farmers to add value to their oilseed crops.

The use of Arkansas' abundant soybean crops- ranked 9th nationally- and its other renewable resources will help avoid the depletion of natural resources while also furthering national environmental objectives. The use of biodiesel blended with the fuel catalyst, Dipetane, will answer pressing environmental concerns raised by the EPA, will reduce greenhouse gases, create a healthier environment, and improve strategic energy security and trade balances.

OBJECTIVES: To provide one of the most impoverished areas of the United States with a biodiesel facility which will improve the economy and environment of the Mississippi River Delta, as well as, the entire Southern part of the United States. To make available a product developed to eliminate the most pressing negative issue facing biodiesel in America, NOx. The biodiesel facility will make feasible the construction, by a farmer's cooperative, of a soybean extrusion plant and grain storage terminal.

PROJECT DESCRIPTION

Since 1999, Arkansas-based Combustion Technologies has been working extensively with end-users of hydrocarbon fuels in the transportation industry. In conjunction with Combustion Technologies West (located in southern California) the company has become involved with extensive research into alternative fuel sources, most specifically biodiesel. Combustion Technologies has become acutely aware of the benefits of biodiesel and desires to help provide answers for an alternative fuel and the growing environmental pollution problems in our nation.

Biodiesel is becoming one of the fastest growing alternative fuels in the United States and interest is growing within Arkansas. This tremendous interest from consumers, government and industry, has brought a group of interested parties from all areas of expertise to the forefront to help in bringing this industry to Arkansas. John and Cynthia Haley, principals in Combustion Technologies, have championed this effort.

John's lifelong residence in Arkansas and his business and community activities in and around Arkansas' Delta communities have exposed him to the many challenges that face that region, one of the poorest in the nation. His commitment to improving the environment and his concern for the welfare of his fellow citizens came together one afternoon as he traveled through the Delta. He realized that many of the pieces of the puzzle for improving the Delta were already in place. Combustion Technologies knows how to produce biodiesel. Arkansas ranks 9th in soybean production nationwide. a key component of biodiesel production.

Recent consolidation of the soybean processing industry has left few options for farmers in Arkansas and the Mississippi River Delta. There are only two processors in Arkansas, Riceland Foods in Stuttgart and Archer Daniels Midland in Little Rock, leaving Arkansas farmers few options. They face high freight costs to processing locations and river load-out facilities and have become subject to extremely low prices during the harvesting season.

A feasibility study was done in 2001-2002 by Winrock International (Alexandria, VA) to ascertain the profitability of a grain storage terminal for this Eastern Arkansas Mississippi River Delta region. The findings were discouraging as to the future profitability of the terminal. However, the study showed soybean oil extrusion to be a viable value-added business. This study led the farmers of the Delta Region to look at the possibility of building a grain storage terminal and soybean oil extrusion plant in the same area as the proposed biodiesel facility. As a unified team, a farmers' cooperative can impact the production, quality and availability of soybean production. Thus formed the Farmers' Blenders Cooperative, a group of farmers in the Eastern Arkansas Mississippi River Delta who are committed to the development of and future opportunities for local farmers.

The farmers' cooperative recognizes the market availability and desire to create opportunity and byproducts for an already abundant soybean harvest. The cooperative, with the help of the Delta Regional Development Group, a non-profit community development corporation committed to the economic and educational viability of the Delta region, is committed to begin the work necessary to accomplish this \$10 million project. The cooperative seeks to capitalize on the volume of its harvest and the need for a grain storage terminal to house the significant crop harvests it markets, supplying soybean oil to the biodiesel facility, as well as producing expeller pressed soybean meal, with significant nutritional advantages for feeding certain livestock and fish. Farmers will again have access to better markets through this cooperative effort and the local economy will be stimulated by the approximately 200 new jobs provided by the biodiesel and soybean oil extrusion plants.

In addition to soybean harvesting, the cooperative will establish an experimental oilseed farm of at least one hundred acres to grow additional oilseed crops for analysis as blends for biodiesel. The potential for creating and examining a variety of genetically engineered oilseed crops to blend with biodiesel is significant.

A new biodiesel production facility will be established to process the soybean and other oilseed crop harvest, creating a clean, environmentally friendly fuel with the fuel catalyst Dipetane. Dipetane, a pure hydrocarbon fuel catalyst, is blended at a 1:200 ratio with all liquid hydrocarbon fuels. It has been tested extensively over the past 15 years and has proven to be successful in acting as a catalyst on the hydrocarbon chains in the fuel so that more of the energy is available upon burning. Unlike detergent additives which wash away unburned deposits, Dipetane treatment allows the asphaltines in the fuel to be fully oxidized thus giving an enhanced energy release. Because Dipetane burns more of the fuel, soot and carbon deposits are eliminated. Dipetane treated fuel burns at lower temperature reducing NOx and SOx emissions. It can be added into either the vehicle fuel tank or bulk storage tank and mechanical mixing is not required. Analysis carried out by the Irish Scientific Research Agency show Dipetane to create no extra wear on an metal, rubber, or plastic engine components.

Dipetane is registered with the Environmental Protection Agency (EPA). Gas Technology Services, an approved Australian Gas Association testing laboratory, tested Dipetane treated diesel fuel from April 2000 to November 2000 to assess the capabilities of Dipetane to reduce both fuel consumption and emissions. The following results with the following results:

STAGE 1 – Sampling and on-line analysis of exhaust gases – prior to the addition of Dipetane
 STAGE 2 – Sampling and on-line analysis of exhaust gases – after the addition and ongoing use of Dipetane for 8 months.

The fully detailed independent findings from this study show a significant reduction in emissions between Stage 1 and Stage 2. Testing was completed at 0 RPM (idle) and 2000 RPM. The results are summarized as follows:

Emission Type	Maximum % Reduction Achieved
Carbon Dioxide - CO ₂	23%
Carbon Monoxide - CO	9.50%

Nitrogen Oxides - NOx	35.40%
Sulphur Oxides - SOx	26.80%
Smoke Density - Opacity	61.50%

The planned biodiesel production facility will be established by purchasing an existing abandoned facility to retrofit for biodiesel production or constructing a new facility in the Eastern Arkansas Mississippi River Delta region, most probably Phillips County. The facility will have the capacity to produce up to 30 million gallons of biodiesel per year, doubling the current annual production of such fuel in the United States. With guidance and assistance from the Arkansas Department of Environmental Quality and the Arkansas Department of Economic Development, two separate facilities have already been identified as potential retrofit candidates.

Since 1993, under the Arkansas Brownfields Program, Arkansas Code 8-7 Subchapter 11, the EPA has provided over \$250 million in Brownfields funding for cleanup and economic redevelopment of similar sites. Redevelopment of such a facility will not only serve to prevent further environmental damage to the site but pump economic life back into this distressed area. An engineering study for the retrofitting of an existing abandoned plant will be conducted to determine the feasibility of accomplishing such a project. The outcomes of this study will not only serve as a guide for fulfillment, but will also have implications for similar locations nationwide.

In preparation for taking the facility online, marketing research will be conducted in conjunction with other biodiesel manufacturers and agricultural engineers nationwide, leading to the composition of a marketing plan written to encompass not only the sale of biodiesel but the sale of all byproducts produced during the manufacturing process. All available information on current legislation, governmental incentives, benefits, contracts, permits, legal issues and funding opportunities pertaining to the production of biodiesel will be researched. Industry accepted practices related to site acquisition, machinery equipment specification and sourcing, storage and handling equipment, and laboratory equipment and supplies will be determined and evaluated throughout this process.

RELEVANCE TO FUNDING PRIORITIES

Arkansas is a prime location for the construction of a biodiesel facility, with all of the necessary components readily available. The feasibility of producing biodiesel in Arkansas is greatly enhanced by the availability of raw products necessary to produce biodiesel, the availability of labor, and the accessibility of many forms of transportation. Long-term poverty and job deterioration in the Delta region, specifically Phillips County where the poverty level was 32.7% in 1999, coupled with its rich array of renewable resources and agricultural knowledge, makes this a particularly interesting and necessary location for initiating economic and community development.

Arkansas ranks ninth in the United States for the production of soybeans with the vast majority of the crops being grown in the eastern Delta region. More than 6,800 Arkansas soybean farmers produce about 110 million bushels on 3.5 million acres of farmland. 33% of the

annual production is processed in Arkansas into raw components leaving the remaining non-crushed beans to be shipped to port areas. The eastern region of Arkansas is well served by all modes of transportation, including ports and airports, pipelines, rail and trucking. Arkansas is fortunate to have the soybean producing counties on or close to three major rivers to facilitate transportation down to New Orleans, La.

Due to these significant challenges and opportunities, a group of proven leaders in the construction, manufacturing, marketing and testing of biodiesel have joined together to initiate this project. They have identified existing abandoned facilities for potential retrofit to methyl ester biodiesel production from vegetable oil that will now only allow for low cost capital development, but also potentially serve as a prototype for hundreds of similar locations across the United States. It is based on published academic reports and extends those concepts into an integrated, continuous high throughput process.

The types of equipment planned for use, particularly the use of a continuous extraction column and early removal of the excess alcohol, are especially innovative. The ability to operate in either batch or continuous mode will permit the facility to maximize production even when equipment is temporarily removed from service for maintenance. Specific development needs include validation of reaction kinetics, validation of separation processes, validation of purification methods, and impact and recovery from process upsets.

Waves of legislation and air quality management agreements established in 1999 and continuing to evolve today is significantly increasing the demand for biodiesel throughout the United States. Published estimates suggest that at least five billion gallons of biodiesel fuel will be needed by 2012. With current United States production of clean biodiesel estimated at 15 million gallons this year, the addition of a 30 million biodiesel facility in Eastern Arkansas would increase biodiesel production in the United States by over 200%.

Initial production suggests that adding the fuel catalyst, Dipetane, to biodiesel shows promising effects for decreasing traditional biodiesel's NOx emissions. Establishing credible, scientific documentation of the effects of a biodiesel blended with Dipetane may lead to major public policy and industry standard changes, answering the pressing problem of NOx facing end-users of biodiesel while reducing all other emissions and increasing fuel mileage. The creation of an experimental farm to grow additional oilseed crops and potentially genetically engineer those crops for use with Dipetane in biodiesel also adds a significant research component to our efforts. The research associated with this production could expand the public policy implications, determining the most effective and efficient means of creating clean biodiesel. Additionally, findings will increase the demand and opportunity for farmers nationwide to produce oilseed products for the production of clean biodiesel. For this project alone, over 1 million bushels of soybeans will be required to fulfill the planned facility's 30 million gallon production capacity. Some 1,500 square miles in the underutilized Eastern Arkansas Mississippi Delta region will be farmed, not including the additional development value surrounding lands will achieve. The formation of a biodiesel production facility in this region will serve as a catalyst for development in areas rich in untapped resources, starving for opportunities to rise above third world economic levels.

STATEMENT OF WORK PROJECT LEADERSHIP

Combustion Technologies, LLC, an Arkansas Limited Liability Company, will lead the collaboration of the Arkansas Delta Biodiesel Research Project in coordinating the various phases of planned research and production. Each partner will update Combustion Technologies regularly on project objective progress through a series of meetings, interactions, and written reports. The company will supply the Dipetane necessary for clean biodiesel production and recruit and review proposals of the different partners necessary to see the project to successful completion. Additionally, Combustion Technologies may provide financing where necessary, possible and appropriate to support initial phases of the project.

ENGINEERING/ CONSTRUCTION ANALYSIS

Lurgi PSI is a leading provider of engineering services and plant construction in the fields of renewable resources, food processing, and chemicals on a turnkey basis. Lurgi has been enlisted to provide the design, procurement, and construction of the biodiesel facility in Eastern Arkansas if the study proves the facility to be feasible. The pre-engineering study will include project development, process design, detailed design, equipment procurement, general contracting specialty fabrication, cost accounting and start-up assistance.

Preliminary engineering design for the feasibility study would produce the following information:

- Process flow diagrams with material balance
- Preliminary equipment specifications and guide drawings
- Preliminary instrument list and specifications
- Preliminary piping and insulation specifications
- Preliminary project site map and equipment layout
- Preliminary Civil Structural design criteria
- Preliminary control system specification and architecture
- Preliminary definition of site utility and site infrastructure
- Preliminary definition of environmental permit requirements

The new production facility would manufacture methyl esters from soybean oil. The facilities proposed by Lurgi PSI are:

Deacidification of Degummed Soybean Oil	104,000 metric tons/yr
Transesterification of Treated Soy Oil	100,000 metric tons/yr
Methyl Ester Drying	100,000 metric tons/yr
Glycerin Water Pretreatment	30,000 metric tons/yr
Glycerin Water Evaporation	12,500 metric tons/yr
Pharmaceutical Grade Glycerin	9,300 metric tons/yr

SITE DEVELOPMENT

Helena-West Helena/Phillips County Port Authority operates the United State's largest new slackwater facility, sixty-five miles south of Memphis, TN, at mile marker 652 on the Mississippi River. Four and one half miles of slackwater frontage and over one mile of fast water

frontage is included in Helena Harbor's 4,000 acre 26 million dollar industrial park. This ideal inland harbor has turning areas and fleeting facilities that are two and one fourth miles long, 300 feet wide and nine feet deep. It has full utilities, interstate highway access, a major oil pipeline, and the industrial park is serviced by rail. The Port Authority has all of the facilities necessary for operation of grain storage, grain processing, and biodiesel manufacture. The Port Authority has been a moving force in bringing the biodiesel potential to the attention of the area agriculturists.

The Port Authority has taken the lead in providing the site for the biodiesel plant and will make available 20 acres of land for the development of a plant in the slackwater facility.

PRODUCT DEVELOPMENT/FARMERS COOPERATIVE FORMATION

Delta Regional Energy Development Group, LLC, is a public benefit corporation formed under Arkansas Act 1147 of 1993, the Nonprofit Corporation Act. The principal purpose of the company is to create interest in, and attract to the Delta areas in Arkansas and surrounding states, economic growth which will have a value-added impact upon the agricultural economy. This would include the feasibility of producer cooperatives, ethanol and biodiesel production, additional grain storage and processing facilities and additional crops for increased production.

The Group will provide technical support and aid in the fundraising processes related to environmental improvements and agricultural research, supporting the development of the Farmer's Blend Cooperative, a group of Delta regional farmers collaborating to grow oilseed crops for the production of biodiesel. The formation of the Farmers Blenders Cooperative will give rise to the eventual construction of the grain storage terminal and soybean oil extrusion plant.

MARKET ANALYSIS

An extensive market analysis will be performed by West Central Soy, a seventy-five year old Iowa-based corporation that has been producing and marketing biodiesel since 1996. In that time, West Central Soy has developed a nationwide network of biodiesel distribution that is currently utilized to channel their present biodiesel production capacity of 12 million gallons into the diesel market. They market biodiesel production from other manufacturers to meet demand in various regions of the country and exports to several countries. Two West Central Soy Representatives are working closely with the petroleum industry to develop an extended sales force that provides biodiesel fuel blends to the diesel fuel consumer. This biodiesel marketing model developed by West Central is being employed successfully with plans to expand the marketing to meet growing demand.

West Central Soy will utilize this distribution network to assist the Arkansas biodiesel facility to provide a market outlet for their production. The company will perform a market analysis and provide support and research pertaining to marketing and sales, market development, distribution and logistics, risk management, transaction processing, and byproduct marketing. West Central Soy will provide the biodiesel production technology to ensure reliable supply of high quality biodiesel.

TESTING AND RESEARCH

Southwest Research Institute in San Antonio, Texas, a nationally recognized, independent nonprofit corporation will research the addition of a proven fuel catalyst, Dipetane, to biodiesel in order to reduce the current problem of an increase in NOx during the combustion of biodiesel. This will aid in the development of a new product, which will address the remaining negative facing the biodiesel industry, and enhance the economic viability of biodiesel usage. In addition to biodiesel production, the fuel catalyst, Dipetane, will also be manufactured on-site. The fuel catalyst is mixed in a 1:200 ratio with a fossil fuel based carrier oil. Southwest Research Institute will be researching the possibility of using biodiesel as the carrier oil. This possibility opens up a wide range of interactions between the biodiesel industry and the petrochemical infrastructure.

Southwest Research Institute is not affiliated with any government agency, educational institution, or corporate entity, nor does it endorse products or services. The Institute will conduct an emissions screening test of Dipetane-treated fuels against baseline or reference fuels composed of biodiesel. The program of tests may include the following:

- Baseline Fuel (Fuel R)
- Dipetane Treated Baseline Fuel (Fuel C1)
- Dipetane + Baseline Fuel as 80% fuel, 20% biofuel (B-20) (Fuel C1)
- Dipetane Treated B-20 (Fuel C3).

Southwest Research Institute has proposed that these fuels be run in the order of RRR, C1C1C1 on Day 1, and C2C2C2 C3C3C3 on Day 2, where each symbol ("R") represents a "hot-start transient run" for HC, C, NOx, Co2 and PM over a period of two days of testing. Fuel economy in terms of lb/hp-hr will be established by carbon balance.

A hot-start transient run is essentially a process defined in the CFR Title 40, Part 86, Subpart N for measuring regulated emissions from a heavy duty diesel engine. Southwest Research routinely runs this procedure as part of our work for EPA and engine OEM, as well as others with the need for emission data. The expected result of this testing will be the significant reduction of NOx in biodiesel treated with "Dipetane." This expectation is based upon the results of extensive testing of diesel treated with "Dipetane." Southwest Research will also do a comparison of biodiesel and carrier oils, such as Telura 619, to determine the feasibility of using biodiesel instead of fossil fuel based carrier oils.

RETROFIT ANALYSIS

Chemical Engineer, Donald Malcolm, will provide expertise in the determining the feasibility of retrofitting an existing abandoned chemical facility in Helena, Arkansas, Cedar Chemical Plant. His experience as the former Senior Production Engineer at the offline facility (both design and implementation experience) will make him an invaluable part of the team. It is anticipated that an existing facility will require significantly less design engineering and construction and can more quickly be brought to start-up than building a new facility from the ground up. This creative and imaginative retrofitting analysis will demonstrate a low cost approach to the production of biodiesel. After initial laboratory testing, the retrofitting process

will be adapted to a plant trial, eventually scaling-up to commercial production. The Cedar Chemical Plant is unique in that it can be operated either continuously or in a batch mode. This dual production capability will allow for experimental innovations to validate new concepts as they are devised, without impacting standard daily production.

MONITORING AND EVALUATION

Combustion Technologies will lead partners in an on-going monitoring and evaluation of the project's feasibility and progress. Initial expectations suggest a 9-12 month timeline for securing site acquisition, determining retrofit capabilities, conducting market analysis, testing products, and establishing the agricultural development schedules. Combustion Technologies will conduct regular meetings and site visits with partners, comparing accomplishments of the activities related to each project objective in addition to any reporting requirements established by funders.

Assisting in this task will be the International accounting and financial consulting firm of Moore, Stephens & Frost, which is also known as MSF Financial Group. It will provide ongoing research and evaluation assistance. The seventy year old Little Rock law firm of Eichenbaum, Liles & Heister, p.a., will provide all legal research and technical assistance that will be required. And the accounting firm of Johnson & Associates, p.a., which for more than thirty-five years has represented industrial, agricultural, and mining clients, will provide audit and accounting services for the project.

At the end of the proposed project timeline, a written document with the following table of contents will be produced by the partnership to discuss the challenges and successes of the study and recommendations for the continuation of the project.

- I. Introduction and Scope of Work
- II. Engineering Study
 - A. Retrofitting of Cedar Chemical Plant
 - B. Construction Plan for New Biodiesel Facility
- III. Biodiesel Research and Development
 - A. New Product Development – Biodiesel/Fuel catalyst results
 - B. Carrier Oil Study
- IV. Demographic and Site Location Analysis
- V. Marketing Analysis
- VI. Legal and Legislation Study
 - A. Legal Structure of organization
 - B. Biodiesel Legislation and Incentives
- VII. Evaluation
 - A. Summary and Conclusions
 - B. Recommendations

This document will provide funders and potential investors with an understanding of the project's strengths, weaknesses, and public policy implications, detailing the approach for remedying challenges and enhancing production to ensure maximum environmental improvements and full operational capacity.

PART II. STATEMENT OF CAPABILITIES

❖ COMBUSTION TECHNOLOGIES, LLC

John H. Haley and his wife Cynthia are the principals of Combustion Technologies, LLC. Cynthia is a UAMS graduate, a licensed realtor, and a managing director of Combustion Technologies. Haley has held directorships in a number of Arkansas firms, including garment, wood products, and shoe manufacturing companies, and telephone and telecommunications companies. Some of the companies for whom he has served as counsel and director have grown from start up to over \$100,000,000 in annual sales. Haley is also a tax attorney and an industrial real estate developer. He has taught at the University of Arkansas Little Rock and the Arkansas Law School, and has been lead attorney in some of the great landmark cases of the past four decades. He is listed in most Who's Who publications and has the highest professional rating.

Combustion Technologies, LLC is the distributor of Dipetane, a fuel catalyst developed and long used in Ireland. It is also active in development of a simple engine using Nitinol bands in conjunction with heat from natural sources. The objective is to provide the means of pumping water, refrigerating foods, and meeting other needs in Third World countries.

The advisory board assists Combustion Technologies in the challenge of competing in the very competitive fuel industry. They provide guidance and feedback about the goals, objectives, and direction of this endeavor, enhancing the management team to bring about sound business knowledge and expertise. Our advisory board members have been selected based upon their business acumen, ability to create new business, and their overall knowledge and influence in the business world.

PRESENT ADVISORS

- John S. Haley, Senior Vice President for Acquisitions, Alltel, fifth largest Independent telephone and cellular company in the United States
- David C. Haley, Partner, HBK Holdings, Dallas, Texas, investment firm managing 3.5 billion dollars, former public securities attorney
- Drexel Martin, retired Vice President, Shell Oil, Houston, Texas
- Bob Pond VP Marketing, ORIX USA Corporation
- Richard McPherson Energy Technology and Development Consultant
- Morris Cranmer, PhD, Chemist and Toxicologist, Cranmer and Associates, former Director of the National Center for Toxicological Research
- Asa Morton, Owner, American Interplex Laboratories
- Steve Sanders, PhD, Graduate MIT, Plasma Physics, Owner NATCO

❖ LURGI PSI www.lurgipsi.com

Lurgi PSI is an integral part of an international engineering and technology group that has developed biodiesel and similar oleochemical projects around the world for several decades. They have an outstanding development record in terms of numbers of plants, production capacity, variety of feedstocks, and by-products. Lurgi biodiesel plants are a proven process with an operational history.

Lurgi PSI is a world leader in several specialized fields of engineering and construction due to its superior technology, innovation, and ability to meet the needs of the client in rapidly evolving industries. The vast resources of technology available through our relationship with Lurgi PSI will be a valuable asset in the feasibility study process. (See attached resumes for Josef Haeupl and Ray Jones)

❖ **DONALD W. MALCOLM** – dmalcolm@cox-internet.com

Chemical Engineer Donald Malcolm will provide expertise in the feasibility of retrofitting the Cedar Chemical Plant in Helena, Arkansas. If negotiations for the Cedar Chemical facility prove to be successful, his experience as Senior Production Engineer at the plant with both design and implementation experience will make him an invaluable part of the team. An existing facility will require significantly less design engineering and construction and can more quickly be brought to start-up. The creative and imaginative retrofitting of an existing plant will serve to demonstrate a low cost approach to the production of biodiesel. The feasibility study will allow for laboratory and initial process development. After initial laboratory testing, the process would be readily adapted to a plant trial with eventual scale-up to commercial production. The Cedar Chemical Plant is unique in that it can be operated either continuously or in a batch mode. This concept would allow for innovations to be tried on a plant scale to validate new concepts as they are devised. (See attached resume)

❖ **HELENA-WEST HELENA/PHILLIPS COUNTY PORT AUTHORITY**

To encourage the development of a new biodiesel facility in Phillips County, the Port Authority would agree make available its infrastructure and would contribute the use of land for construction of storage, processing and transportation facilities. In addition to all of these necessary components of the completed project, its sites would also be available as a biodiesel manufacturing plant location in the event that the retrofitting of Cedar Chemical plant becomes impractical.

❖ **DELTA REGIONAL ENERGY DEVELOPMENT GROUP**

Delta Regional Energy Development Group, Inc. is a Non-profit Arkansas Corporation formed to promote biomass material processing and manufacture, and to assist in the formation of local cooperatives of farmers which would provide the storage and processing facilities for these industries. Its Board of Directors consists of many of the leading farmers in the Phillips County region, as well as representatives of Combustion Technologies and the Helena/West Helena Phillips County Port Authority. These farmers raise soybeans, cotton, corn, wheat, grain sorghum, and milo.

❖ **WEST CENTRAL SOY** www.west-centralsoy.com

West Central was incorporated in 1933 in Ralston, Iowa, which is still its headquarters. They have been adding value to member soybeans since the 1940's. Employing 250 people, West Central has annual sales of \$250 million. 27 million bushels of soy oil are processed into alkyl esters annually by West Central. Some of West Central Soy's valued customers include the US military, US Department of Defense, National Parks, MFA Oil, Walmart, and hundreds of B20 fleets across the United States.

GARY HAER – Biodiesel Sales and Marketing Director, Vice President National Biodiesel Board. Has increased sales from 0 to 2 million gallons with projected sales in 2003 of 5-6 million gallons.

MYRON DANZER – Biodiesel Plant Manager, National Biodiesel Board
National Accreditation Committee

NILE RAMSBOTTOM – Executive Vice President Soy Division

❖ **SOUTHWEST RESEARCH INSTITUTE** www.swri.org

Located on 1200 acres in San Antonio, Texas, Southwest Research Institute has state-of-the-art equipment and facilities. Southwest Research Institute performs applied contract research and development and encourages technology transfer. Almost two million square feet of laboratories, offices and test facilities support work on almost 1500 client projects each year. Southwest Research has a wide range of technical competencies and breadth. Its 2800 staff members in 11 technical divisions have expertise in such areas as chemistry, space sciences, nondestructive evaluation, automation, engine design, mechanical engineering, electronics and more. The Institute can assemble a multidisciplinary team of experts required by any technical project. The Fuels Analysis Laboratory in the Emissions Research Division will be conducting the emissions testing on Dipetane treated biodiesel. This Division offers virtually every standard industry test.

❖ **UNIVERSITY OF ARKANSAS DIVISION OF AGRICULTURE** www.agagriculture.org

The mission of the University of Arkansas Division of Agriculture is to provide research-based information to help Arkansans improve their economic well-being and the quality of their lives. They offer advice on a number of subjects related to specialty enterprises including, planning, enterprise budgets, production, marketing and value added products.

❖ **ARKANSAS DEPARTMENT OF ECONOMIC DEVELOPMENT** www.aedc.state.ar.us

The Arkansas Department of Economic Development is committed to providing a team of business development professionals to bring better jobs to the people of Arkansas. The Community Development Section focuses on technology in the energy field addressing alternative sources of power and fuels and will offer support in the following areas:

- Building and Sites
- Financing
- Incentives
- Export assistance
- Business development
- Technology assistance
- Permits

PROFESSIONAL PROFILE

JOSEF HAEUPL

EXPERIENCE

Director of Technology and Engineering

- Director Technology, Lurgi PSI, Memphis, TN and Lurgi Life Sciences, Bad Bubendorf, Switzerland. Business development and front-end engineering including feasibility studies and business planning.

Selected Projects:

Feasibility, conceptual and preliminary engineering for a BioDiesel Production Facility at Southern States Power Company, Riverside CA. Various studies to evaluate and compare alternative feedstock and process routes applicable in the BioDiesel Industry. Usable feed materials include vegetable oils, beef tallow, greases (yellow grease, brown grease), recycled fryer oils and Soapstock from oil refining.

- Director Technology, Pharmaplan GmbH, Bad Homburg, Germany and Pharmaplan N.A., Philadelphia, PA Focussing on business development and front-end engineering.

Selected Projects:

Conceptual through detailed engineering for a GMP compliant API Technikum at Byk Gulden, Singen, Germany. Feasibility study for a GMP compliant API Manufacturing facility at Transopharm, Hamburg, Germany.

- Manager of Engineering, Lonzagroup, Fair Lawn, NJ. Head of engineering for all of Lonza's sites in the US, including Lonza's Oleochemical sites in Painesville, OH, Williamsport, PA, and Mapleton, IL. Activities included feasibility evaluation, engineering, procurement, construction supervision as well as project management and start-up services.

Selected Projects:

Fatty Acid Distillation System in Painesville, OH (1998) Various de-bottlenecking projects in Painesville, OH (1995-1997), including

PROFESSIONAL PROFILE

Page 2 of 2

JOSEF HAEUPL

EXPERIENCE (cont.)

Hydrogenation, Fatty Acid Splitting and Glycerin Processing. Expansion of Lonza's Ester Facility in Williamsport, PA (1997), from feasibility study to implementation, including Esterification, Ethoxylation, Spray Drying and Packaging systems. Batch Distillation System for Alcohols, Fatty Acids and Amines in Mapleton, IL (1986) Crystalline Sorbitol Production Plant in Mapleton, IL (1985) Responsible for in-house process development, design, installation and start-up of the facility. Site Development Planning for all Lonza sites in the US. Review and alignment of all site related activities with the corporate business plan for the Lonza Group's sites, including Painesville OH, Williamsport PA, Mapleton IL as well as Bayport TX, Conshohocken PA, Los Angeles CA and Long Beach CA.

EDUCATION

MBA in Management, Fairleigh Dickinson University, College of Business Administration, Teaneck, NJ

Engineering Certificate, Dipl.-Ing. (FH) in Mechanical Engineering, State College Aalen, Aalen, Germany

PROFESSIONAL AFFILIATION

American Oil Chemist's Society (AOCS)
International Society of Pharmaceutical Engineering (ISPE)
German Association of Engineers (VDI- Verein Deutscher Ingenieure)

PROFESSIONAL PROFILE

RAY JONES, P.E.

EXPERIENCE

Project Management

- Managed multiple plant projects for a major chemical corporation from concept through design and construction.
- Project Manager in the Corporate Engineering Division for a specialty chemical corporation. Managed capital projects from conception to mechanical completion and start-up. Responsibilities included capital cost and schedule control. Working relationships were maintained with contractors, manufacturing personnel, customers, and regulatory agency personnel.
- Senior Process Engineer, Interim QA/QC Supervisor, and an Engineering Supervisor for a specialty chemical corporation. Managed capital projects and small group of engineers and draftsmen.
- Project Engineer, Maintenance Engineer, Area Process Engineer, Process Engineer, Senior Process Engineer, and Production Supervisor for a specialty chemical company. Managed capital projects, scheduled maintenance, designed process improvements, and managed up to 27 employees in manufacturing of solid product. Processes included handling of solids, liquids, and gases.
- Completed a \$54 million capital expansion which included a new 200,000 lb/hr boiler, plus the following new process facilities:
 - 208,000 SCFH hydrogen plant
 - 30 million pound per year polymer additives plant
 - Pre-treatment process for Furfural
 - A Tetrahydrofuran production facility
 - A wastewater stripping and treatment facility
 - Miscellaneous plant utility system

PROFESSIONAL PROFILE

PAGE 2 OF 3

RAY JONES, P.E.

EXPERIENCE

- Designed and installed facilities for production of 4 million pounds per year of paper sizing agent for proprietary customer. \$3.3 million capital. Later debottlenecked production to 7.3 million pounds for \$1.4 million capital.
- Designed and installed facilities for production for low toxicity pesticide for livestock application for proprietary customer. \$3.4 million capital. Included toxic fume incinerator.
- Designed and constructed semi-works facility for manufacture of proprietary chemical for a specialty chemical facility. Final product, raw materials and intermediates control required extraordinary containment measures due to extreme toxicity. Manufactured the purest product customer had seen during technology development.
- Designed and constructed facilities using existing equipment for toll manufacture of brominated specialty chemical for a specialty chemical facility.
- Designed and constructed facilities for toll purification of organic agricultural chemical for Rhone Poulenc. Removed impurity allowing product to meet customer specifications.
- Designed and constructed 600 gpm industrial wastewater treatment facility for widely variable plant wastewater quality. System featured unique design for pH control. Final effluent disposal was by underground injection well.
- Designed and constructed facilities for toll manufacture or proprietary agricultural chemical for a specialty chemical company. Designed for 12,000 pounds per day and produced over 16,000 pounds per day of product.
- Designed and constructed facilities using existing equipment for toll manufacture or proprietary organic chemical for a specialty chemical company. Process required safe unloading and handling of organic isocyanate compound and drying of final powdered product under intense vacuum.

**PROFESSIONAL
PROFILE**

PAGE 3 OF 3

RAY JONES, P.E.

EXPERIENCE

- Managed \$35 million environmental remediation project covering pond closures, landfill closures, and soils and groundwater remediation. Project included above ground treatment facilities.

EDUCATION

Bachelor of Science in Chemical Engineering
University of Arkansas
Fayetteville, Arkansas

TRAINING

Professional Engineers License
State of Tennessee

Fundamentals of Successful Project Management
Memphis

Conflict Resolution Seminar
Memphis

Questimate Cost Estimate
Bethesda

OSHA 40 Hour Training
Memphis

NIOSH 40 Hour Course
Philadelphia

Economic Principles
St. Louis

Donald W. Malcolm
312 North 7th St.
West Helena, AR 72390
Home Phone (870) 572-9462
Email: dmalcolm@cox-internet.com

SUMMARY

Highly skilled, flexible and motivated chemical engineer with more than 20 years of extensive operations, engineering, and supervisory experience in world-class chemical facilities. Team player with broad experience in both continuous and batch processes. Extensive experience in environmental control, quality improvement, distillation, fluid flow, heat transfer, metallurgy and mass & material balances. Highly skilled in process definition, optimization and improvement methods focused on safety, environmental compliance and operability. Highly developed cost control and budgeting skills targeted toward maximum return on investment. Intimate knowledge of injury management and prevention processes. Skilled in both oral and written communications as well as in the use of PC's for productivity enhancement and business analysis (AutoCad LT, Visio, MS Office, Lotus).

OBJECTIVE

To obtain an interesting and challenging engineering position in the chemical manufacturing industry allowing me to use my skills in chemical process improvement, plant operations, design and problem solving and to deepen and broaden my experience base. To afford the opportunity to further develop my skills in business evaluation and development.

WORK HISTORY

Plant Engineer, Cypress Chemical Co., Helena, AR (2002-Present)

Managed capital projects in excess of \$500K. Designed and managed on time and in budget installation of a new sludge handling process. Developed economics for conversion of plant to direct purchase of natural gas and implemented conversion, including negotiation of gas purchase and transportation contracts. Developed and implemented detailed raw materials monitoring process. Responsible for coordination with consultants and contractors for plant storm water monitoring and air permit testing. Identified and developed product treatment process to reduce odor and dust.

Senior Production Engineer, Cedar Chemical Corp., West Helena, AR (2000-2002)

Organizational realignment during restructuring that placed focus on operational problem solving and troubleshooting skills. Oversee the activities of three process engineers to establish priorities and coordinate engineering manpower. Coordinate turnarounds between custom manufacturing projects, monitor production yields and identify and implement improvement opportunities, develop and review P&I diagrams, write and teach operating procedures. Designed and implemented change from batch process to semi-continuous process resulting in 80% increase in throughput at no capital expense. Identified process changes to a 4-step batch process resulting in an increase in throughput of 30% with minor capital requirements. Designed and implemented an impurities purge system saving approximately \$60K over 120 day campaign with more consistent control of product quality.

Production Manager, Cedar Chemical Corp., West Helena, AR (1999-2000)

Responsible for the day-to-day operations of three chemical process units and packaging warehouse including troubleshooting and engineering improvements. Supervise a team of 38 operators, 4 shift supervisors, a packaging supervisor and one Production Superintendent. Successfully managed process start-ups for 6 custom projects in a 1 year span. Work with process engineers to finalize process designs for the custom units. Key client contact for custom projects. Work extensively with support groups to improve the physical plant. Coordinate with marketing and logistics to insure raw material and product availability. Recognized "change agent." Initiated, chaired, and championed multiple problem solving teams to address key operational and management concerns including operator skills progression and product quality improvements. Manage personnel development in area, identifying needs and developmental opportunities for both supervisors and operators.

Sr. Process Engineer, Cedar Chemical Corp., West Helena, AR (1997-1999)

Responsible for all process engineering projects in two custom batch chemical production units. Successfully managed start-up and operation of 3 custom projects resulting in improved yields (up to 30%), decreased rework and lower costs. Work closely with client representatives in the development, start-up, and operation of custom projects. Identify, develop, and implement process modifications for reducing costs, increasing efficiencies, and improving quality. Conduct custom process reviews to analyze "fit" and operational economics; develop initial process design. Conduct major incident investigations including root cause analysis, corrective action recommendations, and coordinate follow-up. Responsible for the development, communication and document control of operating procedures for units. Conduct hazard reviews, with documentation, of all process changes. Identified key control point in unit operations resulting in a 1/3 reduction in manufacturing costs with a 20% increase in production. Developed and implemented manufacturing cost model to aid in real time decision making. Directed custom process start-up in record time with improved performance. Negotiated raw material and conversion yields with client.

Owner/President, White River Investments, Inc., Rose Hill, KS (1995-1997)

Created holding corporation to purchase and operate a retail dry cleaning business. Operated and managed multi-location business employing 14. Handled all day-to-day functions of business including bookkeeping, advertising, production, environmental control, customer service and maintenance. Turned business from questionable profitability to solid financial performance. Developed key client relationships resulting in increased repeat business by exemplary customer service. Sold business at a substantial return.

Production Superintendent, Vulcan Chemicals, Wichita, (1991-1995)

Managed area of four production units with 42 operators, 5 shift supervisors, 3 day supervisors and an engineer. Responsible for production volumes, quality and cost control. Responsible for planning and implementation of OSHA process safety requirements, ISO 9000 certification of all products, environmental compliance, and TQM initiatives. Our department was awarded President's Quality award two years in a row. Completed OSHA PSM activities ahead of schedule. Participant on inter-company team with major customer to identify needs and provide support. Department attained and maintained ISO certification on all products. Performed day-to-day process troubleshooting. Developed comprehensive corrosion control program leading to an annual cost reduction of \$1MM. Led plant team for employee recognition and safety performance. Developed process to augment safety performance in addition to plant safety process. Conducted business analysis of process unit

resulting in decision to cease that operation. Department established numerous all-time production records. Developed, implemented and monitored annual budgets of approximately \$30MM.

Operations Manager, American MicroTrace Corp., Fairbury, NE (1990-1991)

Site manager for small agricultural micronutrients production facility. Full P&L responsibility for site employing 28 personnel with an annual budget of \$10MM. Developed and implemented effective safety process. Effectively reduced incidence and severity of injuries by instituting management controls. Developed and implemented effective management process by defining responsibilities and instituting controls. Instituted use of SPC to begin definition of process capabilities.

Production Superintendent, Vulcan Chemicals, Geismar, LA (1978-1990)

Responsible for all facets of production, safety, and maintenance. Supervised departments of up to 22 operators, 5 shift supervisors and 2 day foremen with annual budgets up to \$25MM. Departments routinely established production, safety, and on-stream time records. Managed interdisciplinary team to debottleneck process and increase capacity by 50%. Developed fundamental cost projection methods for processes. Member of multi-site team which developed corporate environmental release prevention policy. Founding member of plant Quality Council. Created inter-company communications team to coordinate pipelined product movements between four different companies. Company representative for international technical group, presented paper at international conference. Wrote and taught operating procedures.

EDUCATION

1977	B. Ch. E., Georgia Institute of Technology
1977	EIT Certified - State of Georgia
1987	Deming Quality Process, Hertz Group
1995	Butler County Community College, misc. course work

BUDGET

Statement of Work	Cost	Contribution (in-kind)
Engineering Study		
A. Lurgi PSI (detail attached)	\$200,000	\$100,000
B. Don Malcolm (detail attached)	518,500	50,000
Research Study		
Southwest Research Institute (detail attached)	25,000	0
Combustion Technologies 2000gal. Dipetane @\$10 (market price)	20,000	20,000
University of Arkansas Experimental Farm	0	0
Site Location New Biodiesel facility/ Retrofit of Plant		
Helena Port Authority 20acre Syr. Lease	200,000	200,000
Cedar Chemical Retrofit	100,000	0
Arkansas Department of Economic Development	0	0
Marketing Study		
West Central Soy	75,000	50,000
Arkansas Department of Economic Dev.	0	0
Legislative/Legal Research		
Moore, Stephens and Frost (detail attached)	48,000	18,000
Eichenbaum Law Firm (detail attached)	120,000	50,000
Support Services		
Johnson and Associates, CPA (detail attached)	78,000	28,000
Combustion Technologies, LLC (detail attached)	375,000	275,000
TOTAL COSTS	\$1,759,500	\$791,000
TOTAL GRANT REQUESTED	\$968,500	

NOTE: The project Term is five calendar Quarters, commencing August 2003, or when funded, whichever is later. The tests, pre-engineering studies, initial retrofit expense, site location, and research and planning will be completed in the first two quarters. The remaining expense will be incurred rateably over the life of the project.

BUDGET: LEGISLATION/LEGAL RESEARCH

MOORE, STEPHENS & FROST, P.A., C.P.A.s TOTAL \$48,000

Tom Gibbons of the Little Rock, Arkansas, office will be in charge. He is a senior partner in the firm. The firm will assist in identifying and quantifying the incentives offered by states and the federal government for the use of biodiesel products. Gibbons' billing rate is \$250 an hour, and he will be aided by assistants whose rates range from \$80 an hour to \$175 an hour. Their estimate of time required is 300 hours, at a blended rate of \$160 an hour.

EICHENBAUM, LILES & HEISTER, P.A. ATTORNEYS TOTAL \$120,000

Eichenbaum Firm is a seventy year old Little Rock law firm specializing in commercial and financial matters. Charles McDaniel, attorney and C.P.A., will be in charge of the project. The firm will identify and quantify the incentives offered by state and federal agencies for the use of biodiesel products specifically, and for the use of products which decrease emissions, including biodiesel. The firm will also research the permits required for biodiesel plant installation and production, transportation of biodiesel by barge and pipeline, and qualification of the biodiesel facility for available tax credits and subsidies. The firm will form the farmers' cooperative which will produce the feedstock and operate the experiment farm. McDaniel's billing rate is \$200 an hour. Other lawyers and paralegals who will assist him have billing rates ranging from \$150 an hour to \$60 an hour. The firm estimates that the time required will be 800 hours at a blended rate of \$150 an hour.

BUDGET: SUPPORT SERVICES

JOHNSON & ASSOCIATES, C.P.A.s TOTAL \$78,000

The accounting firm of Johnson & Associates, of Little Rock, Arkansas, will provide accounting and audit services for the project out of its Little Rock, Arkansas, office. It will also make application for all permits and authorizations, and will file all reports required or needed. Michael B. Johnson of that office will be in charge. He is a senior partner in the firm. His billing rate is \$175 an hour. Others in the firm that will be working on this project have billing rates ranging from \$45 an hour to \$140 an hour. The firm estimates that the time required will be 650 hours at a blended rate of \$120 an hour.

COMBUSTION TECHNOLOGIES, LLC TOTAL \$275,000

The Applicant Combustion Technologies will provide the Project Director, who will be John Haley, President, and whose billing rate is \$250 an hour, his assistant Cynthia Haley, Vice President, whose charge is \$50 an hour, and a secretary to be selected and who will be paid a salary of \$5,000 per quarter. Travel is estimated at \$1,000 per month, supplies and miscellaneous expenses at \$1,000 per month, and rent of office space at \$1,333 a month. Haley estimates that Cynthia will be working full time on the project for five quarters, and that he will be devoting about 1,000 hours to the project over that same period of time. The total cost will be \$75,000 per quarter for the five quarters of the project duration.

	<u>1st Quarter</u>	<u>2nd Qtr.</u>	<u>3rd Qtr.</u>	<u>4th Qtr.</u>	<u>5th Qtr.</u>
Project Director	50,000	50,000	50,000	50,000	50,000
Rent	4,000	4,000	4,000	4,000	4,000
Assistant	10,000	10,000	10,000	10,000	10,000
Secretarial	5,000	5,000	5,000	5,000	5,000
Travel	3,000	3,000	3,000	3,000	3,000
Supplies, Misc.	3,000	3,000	3,000	3,000	3,000
Total	75,000	75,000	75,000	75,000	75,000

BUDGET: RESEARCH

SOUTHWEST RESEARCH INSTITUTE TOTAL \$25,000

The program of tests may include the following:

- Baseline Fuel (Fuel R)
- Dipetane Treated Baseline Fuel (Fuel C1)
- Dipetane + Baseline Fuel as 80% fuel, 20% biofuel (B-20) (Fuel C1)
- Dipetane Treated B-20 (Fuel C3).

Southwest Research Institute has proposed that these fuels be run in the order of RRR, C1C1C1 on Day 1, and C2C2C2 C3C3C3 on Day 2, where each symbol ("R") represents a "hot-start transient run" for HC, C, NOx, Co2 and PM over a period of two days of testing. Fuel economy in terms of lb/hp-hr will be established by carbon balance.

BUDGET: ENGINEERING

LURGI PSI TOTAL \$200,000

Lurgi PSI will do the pre-engineering report to include the following:

- Process flow diagrams with material balance
- Preliminary equipment specifications and guide drawings
- Preliminary instrument list and specifications
- Preliminary piping and insulation specifications
- Preliminary project site map and equipment layout
- Preliminary Civil Structural design criteria
- Preliminary control system specification and architecture
- Preliminary definition of site utility and site infrastructure
- Preliminary definition of environmental permit requirements

DON MALCOLM TOTAL \$518,500

Biodiesel Development Budget DON MALCOLM

Laboratory and Initial Process Development

		Monthly Expense	3-Month Total
Wages and Fringes			
Salaries			
Don Malcolm *		8000	24000
Contract Chemist	75.25 /hr	9030	27090
Lab Technician	30.00 /hr	3500	10500
Subtotal		20530	61590
Fringes			
FICA *		600	1800
Life and Med. Insurance *		750	2250
Subtotal		1350	4050
Consultant Expense			
Environmental Consultant		5000	15000
Subtotal		5000	15000
Travel			
Mileage		560	1680
Lodging		400	1200
Meals		350	1050
Airfare		1000	3000
Subtotal		2310	6930
Facilities			
Lab and Office (Rent)		2000	6000
Subtotal		2000	6000
Utilities			
Electricity		200	600
Phone		300	900
Water		75	225
Trash		50	150
Natural Gas		50	150
Subtotal		675	2025
Laboratory Expenses			
Parts		1000	3000
Analytic Gases		500	1500
Reagents		400	1200
Waste Disposal		500	1500
Lab Equipment (1x purchase)		5000	5000
Subtotal		7400	12200
Office Supplies			
Copier/Printer		200	600
Supplies		100	300
Subtotal		300	900

Biodiesel Development Budget DON MALCOLM

Laboratory and Initial Process Development

Contingency	(25%)	9891	27174
Grand Total		\$44,456	\$135,869

Biodiesel Development Budget

Plant Scale Production Test

		Monthly Expense	3-Month Total
Wages and Fringes			
Salaries			
Don Malcolm		8000	24000
Operations Supervisor		4000	12000
Operators (2)	\$15 /hr	5040	10080
Lab Technician	\$15 /hr	2520	7560
Subtotal		19560	53640
Fringes			
FICA		1467	4401
Life and Med. Insurance		3750	11250
Subtotal		5217	15651
Consultant Expense			
Environmental Consultant		10000	25000
Subtotal		10000	25000
Plant Trial Preparation and Support			
Mechanical Preparation			
Pipefitting	\$35 /hr	21000	28000
Elec. & Inst. Tech	\$35 /hr	4200	4200
Control System		7000	7000
Millwrights	\$35 /hr	7000	7000
Materials		15000	15000
Subtotal		54200	61200
Utilities			
Boiler rental		15000	30000
Chiller rental		15000	30000
Natural Gas		5000	5000
Water		250	250
Nitrogen		4000	4000
Subtotal		39250	69250
Facilities			
Plant Rental		10000	30000
Subtotal		10000	30000
Raw Materials and Wastes			
Oil		11000	11000
Methanol		525	525
Caustic		500	500
Waste Disposal		7000	7000
Subtotal		19025	19025

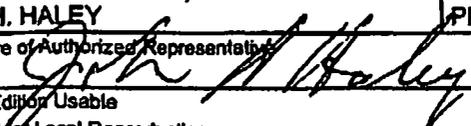
Biodiesel Development Budget

Plant Scale Production Test

Travel		
Mileage	560	1680
Lodging	400	1200
Meals	350	1050
Airfare	1000	3000
Subtotal	2310	6930
Facilities		
Lab and Office (Rent)	2000	6000
Subtotal	2000	6000
Utilities		
Electricity	200	600
Phone	300	900
Water	200	600
Trash	50	150
Natural Gas	50	150
Subtotal	800	2400
Laboratory Expenses		
Parts	1000	3000
Analytic Gases	500	1500
Reagents	400	1200
Waste Disposal	500	1500
Lab Equipment (1x purchase)	0	0
Subtotal	2400	7200
Office Supplies		
Copier/Printer	200	600
Supplies	100	300
Subtotal	300	900
Contingency (25%)	41266	74299
Grand Total	\$206,328	\$371,495

**APPLICATION FOR
FEDERAL ASSISTANCE**

OMB Approval No. 0348-0043

		2. DATE SUBMITTED May 15, 2003	Applicant Identifier
1. TYPE OF SUBMISSION: Application <input type="checkbox"/> Construction <input checked="" type="checkbox"/> Non-Construction Preapplication <input type="checkbox"/> Construction <input type="checkbox"/> Non-Construction		3. DATE RECEIVED BY STATE	State Application Identifier
		4. DATE RECEIVED BY FEDERAL AGENCY	Federal Identifier
5. APPLICANT INFORMATION			
Legal Name: Combustion Technologies, LLC		Organizational Unit: Main office - Little Rock, Arkansas	
Address (give city, county, State, and zip code): P.O. Box 3730 Little Rock, Arkansas 72203		Name and telephone number of person to be contacted on matters involving this application (give area code) John or Cynthia Haley 501-225-9125	
6. EMPLOYER IDENTIFICATION NUMBER (EIN): 71-0830486		7. TYPE OF APPLICANT: (enter appropriate letter in box) A. State B. County C. Municipal D. Township E. Interstate F. Intermunicipal G. Special District H. Independent School Dist. I. State Controlled Institution of Higher Learning J. Private University K. Indian Tribe L. Individual M. Profit Organization N. Other (Specify) _____ <div style="text-align:right; border: 1px solid black; padding: 2px; display: inline-block;">m</div>	
8. TYPE OF APPLICATION: <input checked="" type="checkbox"/> New <input type="checkbox"/> Continuation <input type="checkbox"/> Revision If Revision, enter appropriate letter(s) in box(es) <input type="checkbox"/> <input type="checkbox"/> A. Increase Award B. Decrease Award C. Increase Duration D. Decrease Duration Other(specify): _____		9. NAME OF FEDERAL AGENCY: United States Department of Agriculture	
10. CATALOG OF FEDERAL DOMESTIC ASSISTANCE NUMBER: 81-087 TITLE: _____		11. DESCRIPTIVE TITLE OF APPLICANT'S PROJECT: ARKANSAS DELTA BIODIESEL RESEARCH PROJECT	
12. AREAS AFFECTED BY PROJECT (Cities, Counties, States, etc.): EASTERN ARKANSAS			
13. PROPOSED PROJECT		14. CONGRESSIONAL DISTRICTS OF: ARKANSAS 1ST & 4TH	
Start Date 8/3/03	Ending Date 11/3/03	a. Applicant Combustion Technologies, LLC	b. Project BIODIESEL PRODUCT DEVELOPMENT AND PLANT
15. ESTIMATED FUNDING:		16. IS APPLICATION SUBJECT TO REVIEW BY STATE EXECUTIVE ORDER 12372 PROCESS?	
a. Federal	\$ 968,500 ⁰⁰	a. YES. THIS PREAPPLICATION/APPLICATION WAS MADE AVAILABLE TO THE STATE EXECUTIVE ORDER 12372 PROCESS FOR REVIEW ON: DATE 05/15/03	
b. Applicant	\$ 295,000 ⁰⁰	b. No. <input type="checkbox"/> PROGRAM IS NOT COVERED BY E. O. 12372 <input type="checkbox"/> OR PROGRAM HAS NOT BEEN SELECTED BY STATE FOR REVIEW	
c. State	\$ ⁰⁰		
d. Local	\$ 296,000 ⁰⁰		
e. Other	\$ 200,000 ⁰⁰		
f. Program Income	\$ ⁰⁰		
g. TOTAL	\$ 1,759,500 ⁰⁰	17. IS THE APPLICANT DELINQUENT ON ANY FEDERAL DEBT? <input type="checkbox"/> Yes If "Yes," attach an explanation. <input checked="" type="checkbox"/> No	
18. TO THE BEST OF MY KNOWLEDGE AND BELIEF, ALL DATA IN THIS APPLICATION/PREAPPLICATION ARE TRUE AND CORRECT, THE DOCUMENT HAS BEEN DULY AUTHORIZED BY THE GOVERNING BODY OF THE APPLICANT AND THE APPLICANT WILL COMPLY WITH THE ATTACHED ASSURANCES IF THE ASSISTANCE IS AWARDED.			
a. Type Name of Authorized Representative JOHN H. HALEY		b. Title PRESIDENT	c. Telephone Number (501) 225-9125
d. Signature of Authorized Representative 		e. Date Signed 5-15-03	

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BUDGET INFORMATION - Non-Construction Programs

OMB Approval No. 0348-0044

SECTION A - BUDGET SUMMARY

Grant Program Function or Activity (a)	Catalog of Federal Domestic Assistance Number (b)	Estimated Unobligated Funds		New or Revised Budget		
		Federal (c)	Non-Federal (d)	Federal (e)	Non-Federal (f)	Total (g)
1. Biomass Research	81-087	\$	\$	\$ 848,500.00	\$ 714,000.00	\$ 1,562,500.00
2.						0.00
3.						0.00
4.						0.00
5. Totals		\$ 0.00	\$ 0.00	\$ 848,500.00	\$ 714,000.00	\$ 1,562,500.00

SECTION B - BUDGET CATEGORIES

6. Object Class Categories	GRANT PROGRAM, FUNCTION OR ACTIVITY				Total (5)
	(1) Biomass Research	(2)	(3)	(4)	
a. Personnel	\$ 325,000.00	\$	\$	\$	\$ 325,000.00
b. Fringe Benefits					0.00
c. Travel	15,000.00				15,000.00
d. Equipment					0.00
e. Supplies	20,000.00				20,000.00
f. Contractual	1,364,000.00				1,364,000.00
g. Construction					0.00
h. Other	35,500.00				35,500.00
i. Total Direct Charges (sum of 6a-6h)	1,759,500.00	0.00	0.00	0.00	1,759,500.00
j. Indirect Charges	0.00				0.00
k. TOTALS (sum of 6i and 6j)	\$ 1,759,500.00	\$ 0.00	\$ 0.00	\$ 0.00	\$ 1,759,500.00
7. Program Income	\$ 0.00	\$	\$	\$	\$ 0.00

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SECTION C - NON-FEDERAL RESOURCES					
(a) Grant Program	(b) Applicant	(c) State	(d) Other Sources	(e) TOTALS	
8. Biomass Research and Development Initiative	\$ 295,000.00	\$ 0.00	\$ 496,000.00	\$ 791,000.00	
9. Federal				0.00	
10. Private				0.00	
11.				0.00	
12. TOTAL (sum of lines 8-11)	\$ 295,000.00	\$ 0.00	\$ 496,000.00	\$ 791,000.00	
SECTION D - FORECASTED CASH NEEDS					
	Total for 1st Year	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter
13. Federal	\$ 925,500.00	\$ 345,500.00	\$ 254,000.00	\$ 163,000.00	\$ 163,000.00
14. Non-Federal	714,000.00	141,000.00	390,000.00	94,000.00	89,000.00
15. TOTAL (sum of lines 13 and 14)	\$ 1,639,500.00	\$ 486,500.00	\$ 644,000.00	\$ 257,000.00	\$ 252,000.00
SECTION E - BUDGET ESTIMATES OF FEDERAL FUNDS NEEDED FOR BALANCE OF THE PROJECT					
(a) Grant Program	FUTURE FUNDING PERIODS (Years)				
	(b) First	(c) Second	(d) Third	(e) Fourth	
16. Biomass Research and Development Initiative	\$	\$	\$	\$	
17. Federal	43,000.00				
18. Private	77,000.00				
19.					
20. TOTAL (sum of lines 16-19)	\$ 120,000.00	\$ 0.00	\$ 0.00	\$ 0.00	
SECTION F - OTHER BUDGET INFORMATION					
21. Direct Charges: 1,759,500		22. Indirect Charges: none			
23. Remarks:					

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Standard Form 424A (Rev. 7-97) Page 2

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ASSURANCES - NON-CONSTRUCTION PROGRAMS

Public reporting burden for this collection of information is estimated to average 15 minutes per response, including time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding the burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to the Office of Management and Budget, Paperwork Reduction Project (0348-0040), Washington, DC 20503.

PLEASE DO NOT RETURN YOUR COMPLETED FORM TO THE OFFICE OF MANAGEMENT AND BUDGET. SEND IT TO THE ADDRESS PROVIDED BY THE SPONSORING AGENCY.

NOTE: Certain of these assurances may not be applicable to your project or program. If you have questions, please contact the awarding agency. Further, certain Federal awarding agencies may require applicants to certify to additional assurances. If such is the case, you will be notified.

As the duly authorized representative of the applicant, I certify that the applicant

1. Has the legal authority to apply for Federal assistance and the institutional, managerial and financial capability (including funds sufficient to pay the non-Federal share of project cost) to ensure proper planning, management and completion of the project described in this application.
2. Will give the awarding agency, the Comptroller General of the United States and, if appropriate, the State, through any authorized representative, access to and the right to examine all records, books, papers, or documents related to the award; and will establish a proper accounting system in accordance with generally accepted accounting standards or agency directives.
3. Will establish safeguards to prohibit employees from using their positions for a purpose that constitutes or presents the appearance of personal or organizational conflict of interest, or personal gain.
4. Will initiate and complete the work within the applicable time frame after receipt of approval of the awarding agency.
5. Will comply with the Intergovernmental Personnel Act of 1970 (42 U.S.C. §§4728-4763) relating to prescribed standards for merit systems for programs funded under one of the 19 statutes or regulations specified in Appendix A of OPM's Standards for a Merit System of Personnel Administration (5 C.F.R. 900, Subpart F).
6. Will comply with all Federal statutes relating to nondiscrimination. These include but are not limited to: (a) Title VI of the Civil Rights Act of 1964 (P.L. 88-352) which prohibits discrimination on the basis of race, color or national origin; (b) Title IX of the Education Amendments of 1972, as amended (20 U.S.C. §§1681-1683, and 1685-1686), which prohibits discrimination on the basis of sex; (c) Section 504 of the Rehabilitation Act of 1973, as amended (29 U.S.C. §794), which prohibits discrimination on the basis of handicaps; (d) the Age Discrimination Act of 1975, as amended (42 U.S.C. §§6101-6107), which prohibits discrimination on the basis of age; (e) the Drug Abuse Office and Treatment Act of 1972 (P.L. 92-255), as amended, relating to nondiscrimination on the basis of drug abuse; (f) the Comprehensive Alcohol Abuse and Alcoholism Prevention, Treatment and Rehabilitation Act of 1970 (P.L. 91-616), as amended, relating to nondiscrimination on the basis of alcohol abuse or alcoholism; (g) §§523 and 527 of the Public Health Service Act of 1912 (42 U.S.C. §§290 dd-3 and 290 ee 3), as amended, relating to confidentiality of alcohol and drug abuse patient records; (h) Title VIII of the Civil Rights Act of 1968 (42 U.S.C. §§3601 et seq.), as amended, relating to nondiscrimination in the sale, rental or financing of housing; (i) any other nondiscrimination provisions in the specific statute(s) under which application for Federal assistance is being made; and, (j) the requirements of any other nondiscrimination statute(s) which may apply to the application.
7. Will comply, or has already complied, with the requirements of Titles II and III of the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970 (P.L. 91-646) which provide for fair and equitable treatment of persons displaced or whose property is acquired as a result of Federal or federally-assisted programs. These requirements apply to all interests in real property acquired for project purposes regardless of Federal participation in purchases.
8. Will comply, as applicable, with provisions of the Hatch Act (5 U.S.C. §§1501-1508 and 7324-7328) which limit the political activities of employees whose principal employment activities are funded in whole or in part with Federal funds.

9. Will comply, as applicable, with the provisions of the Davis-Bacon Act (40 U.S.C. §§276a to 276a-7), the Copeland Act (40 U.S.C. §276c and 18 U.S.C. §874), and the Contract Work Hours and Safety Standards Act (40 U.S.C. §§327-333), regarding labor standards for federally-assisted construction subagreements.
10. Will comply, if applicable, with flood insurance purchase requirements of Section 102(a) of the Flood Disaster Protection Act of 1973 (P.L. 93-234) which requires recipients in a special flood hazard area to participate in the program and to purchase flood insurance if the total cost of insurable construction and acquisition is \$10,000 or more.
11. Will comply with environmental standards which may be prescribed pursuant to the following: (a) institution of environmental quality control measures under the National Environmental Policy Act of 1969 (P.L. 91-190) and Executive Order (EO) 11514; (b) notification of violating facilities pursuant to EO 11738; (c) protection of wetlands pursuant to EO 11990; (d) evaluation of flood hazards in floodplains in accordance with EO 11988; (e) assurance of project consistency with the approved State management program developed under the Coastal Zone Management Act of 1972 (16 U.S.C. §§1451 et seq.); (f) conformity of Federal actions to State (Clean Air) Implementation Plans under Section 176(c) of the Clean Air Act of 1955, as amended (42 U.S.C. §§7401 et seq.); (g) protection of underground sources of drinking water under the Safe Drinking Water Act of 1974, as amended (P.L. 93-523); and, (h) protection of endangered species under the Endangered Species Act of 1973, as amended (P.L. 93-205).
12. Will comply with the Wild and Scenic Rivers Act of 1968 (16 U.S.C. §§1271 et seq.) related to protecting components or potential components of the national wild and scenic rivers system.
13. Will assist the awarding agency in assuring compliance with Section 106 of the National Historic Preservation Act of 1966, as amended (16 U.S.C. §470), EO 11593 (identification and protection of historic properties), and the Archaeological and Historic Preservation Act of 1974 (16 U.S.C. §§469a-1 et seq.).
14. Will comply with P.L. 93-348 regarding the protection of human subjects involved in research, development, and related activities supported by this award of assistance.
15. Will comply with the Laboratory Animal Welfare Act of 1966 (P.L. 89-544, as amended, 7 U.S.C. §§2131 et seq.) pertaining to the care, handling, and treatment of warm blooded animals held for research, teaching, or other activities supported by this award of assistance.
16. Will comply with the Lead-Based Paint Poisoning Prevention Act (42 U.S.C. §§4801 et seq.) which prohibits the use of lead-based paint in construction or rehabilitation of residence structures.
17. Will cause to be performed the required financial and compliance audits in accordance with the Single Audit Act Amendments of 1996 and OMB Circular No. A-133, "Audits of States, Local Governments, and Non-Profit Organizations."
18. Will comply with all applicable requirements of all other Federal laws, executive orders, regulations, and policies governing this program.

SIGNATURE OF AUTHORIZED CERTIFYING OFFICIAL <i>John H. Haley</i>	TITLE <i>President</i>
APPLICANT ORGANIZATION <i>Combustion Technologies, L.L.C.</i>	DATE SUBMITTED <i>May 15, 2003</i>

Standard Form 424B (Rev. 7-97) Back

**ARKANSAS DELTA BIODIESEL
RESEARCH PROJECT**



**BIOMASS RESEARCH AND DEVELOPMENT INITIATIVE
031803-001**

BY

**COMBUSTION TECHNOLOGIES, LLC
HELENA- WEST HELENA/PHILLIPS COUNTY PORT AUTHORITY
LURGI, PSI**

**ARKANSAS DEPARTMENT OF ECONOMIC DEVELOPMENT
DELTA REGIONAL ENERGY DEVELOPMENT GROUP, INC.
UNIVERSITY OF ARKANSAS DIVISION OF AGRICULTURE**

May 15, 2003

TECHNICAL SUMMARY

Combustion Technologies, LLC, Helena-West Helena/Phillips County Port Authority, Lurgi, PSI, Delta Regional Energy Development Group, Inc., Arkansas Department of Economic Development, and the University of Arkansas Division of Agriculture (Applicant) proposes to study the feasibility of providing the economically distressed Eastern Arkansas Mississippi River Delta region with a facility capable of producing up to 30 million gallons of biodiesel annually.

The Applicant will explore:

- 1) The probability that the addition of fuel catalyst, Dipetane, to biodiesel results in a substantial reduction of Nitrous Oxide (NO_x)
- 2) Using biodiesel as a carrier oil to replace fossil fuel based products
- 3) Genetically engineering oilseed crop-based biodiesel and examining its environmental performance versus traditional biodiesel when both have the catalyst Dipetane; and
- 4) Creating a prototype facility for retrofitting existing abandoned facilities (brownfield conversions) for the production of biodiesel.

With the requested grant funds the Applicant will conduct a variety of research and activities aimed at completing a biodiesel facility project and providing a fuel which will answer the NO_x problem facing the end-users of biodiesel worldwide. Activities will include:

- ❖ Retaining an independent research institute to test product blends on the reduction of NO_x by blending the proven fuel catalyst, Dipetane, with biodiesel, and to examine the possibility of using biodiesel as a carrier oil.
- ❖ Conducting an engineering study to assess the benefits of retrofitting an existing, abandoned facility versus building a new facility for the production of biodiesel.
- ❖ Performing a market analysis encompassing all areas pertaining to the sale of biodiesel and its byproducts, including present and future demand and national and international markets.
- ❖ Reviewing federal policy, legislation, benefits, incentives, contracts, permits and all legal issues and funding opportunities pertaining to the use and production of biodiesel.
- ❖ Forming a Farmer's Cooperative to create and operate a grain storage terminal and soybean oil extrusion plant, and to develop an oilseed experimental farm to explore alternative genetically-engineered crop opportunities for biodiesel production.

The planned research and activities will provide the Applicant with the information necessary to successfully complete this innovative biodiesel production project. The facility represents significant advances in rural based biodiesel production, handling, processing and manufacturing, and will double the present biodiesel production in the United States. The economy of Arkansas and specifically its Eastern Delta region- one of the poorest rural areas in the United States- will be greatly enhanced. The facility will create approximately 200 new jobs as well as significant opportunities for farmers to add value to their oilseed crops.

The use of Arkansas' abundant soybean crops- ranked 9th nationally- and its other renewable resources will help avoid the depletion of natural resources while also furthering national environmental objectives. The use of biodiesel blended with the fuel catalyst, Dipetane, will answer pressing environmental concerns raised by the EPA, will reduce greenhouse gases, create a healthier environment, and improve strategic energy security and trade balances.

OBJECTIVES: To provide one of the most impoverished areas of the United States with a biodiesel facility which will improve the economy and environment of the Mississippi River Delta, as well as, the entire Southern part of the United States. To make available a product developed to eliminate the most pressing negative issue facing biodiesel in America, NOx. The biodiesel facility will make feasible the construction, by a farmer's cooperative, of a soybean extrusion plant and grain storage terminal.

PROJECT DESCRIPTION

Since 1999, Arkansas-based Combustion Technologies has been working extensively with end-users of hydrocarbon fuels in the transportation industry. In conjunction with Combustion Technologies West (located in southern California) the company has become involved with extensive research into alternative fuel sources, most specifically biodiesel. Combustion Technologies has become acutely aware of the benefits of biodiesel and desires to help provide answers for an alternative fuel and the growing environmental pollution problems in our nation.

Biodiesel is becoming one of the fastest growing alternative fuels in the United States and interest is growing within Arkansas. This tremendous interest from consumers, government and industry, has brought a group of interested parties from all areas of expertise to the forefront to help in bringing this industry to Arkansas. John and Cynthia Haley, principals in Combustion Technologies, have championed this effort.

John's lifelong residence in Arkansas and his business and community activities in and around Arkansas' Delta communities have exposed him to the many challenges that face that region, one of the poorest in the nation. His commitment to improving the environment and his concern for the welfare of his fellow citizens came together one afternoon as he traveled through the Delta. He realized that many of the pieces of the puzzle for improving the Delta were already in place. Combustion Technologies knows how to produce biodiesel. Arkansas ranks 9th in soybean production nationwide. a key component of biodiesel production.

Recent consolidation of the soybean processing industry has left few options for farmers in Arkansas and the Mississippi River Delta. There are only two processors in Arkansas, Riceland Foods in Stuttgart and Archer Daniels Midland in Little Rock, leaving Arkansas farmers few options. They face high freight costs to processing locations and river load-out facilities and have become subject to extremely low prices during the harvesting season.

A feasibility study was done in 2001-2002 by Winrock International (Alexandria, VA) to ascertain the profitability of a grain storage terminal for this Eastern Arkansas Mississippi River Delta region. The findings were discouraging as to the future profitability of the terminal. However, the study showed soybean oil extrusion to be a viable value-added business. This study led the farmers of the Delta Region to look at the possibility of building a grain storage terminal and soybean oil extrusion plant in the same area as the proposed biodiesel facility. As a unified team, a farmers' cooperative can impact the production, quality and availability of soybean production. Thus formed the Farmers' Blenders Cooperative, a group of farmers in the Eastern Arkansas Mississippi River Delta who are committed to the development of and future opportunities for local farmers.

The farmers' cooperative recognizes the market availability and desire to create opportunity and byproducts for an already abundant soybean harvest. The cooperative, with the help of the Delta Regional Development Group, a non-profit community development corporation committed to the economic and educational viability of the Delta region, is committed to begin the work necessary to accomplish this \$10 million project. The cooperative seeks to capitalize on the volume of its harvest and the need for a grain storage terminal to house the significant crop harvests it markets, supplying soybean oil to the biodiesel facility, as well as producing expeller pressed soybean meal, with significant nutritional advantages for feeding certain livestock and fish. Farmers will again have access to better markets through this cooperative effort and the local economy will be stimulated by the approximately 200 new jobs provided by the biodiesel and soybean oil extrusion plants.

In addition to soybean harvesting, the cooperative will establish an experimental oilseed farm of at least one hundred acres to grow additional oilseed crops for analysis as blends for biodiesel. The potential for creating and examining a variety of genetically engineered oilseed crops to blend with biodiesel is significant.

A new biodiesel production facility will be established to process the soybean and other oilseed crop harvest, creating a clean, environmentally friendly fuel with the fuel catalyst Dipetane. Dipetane, a pure hydrocarbon fuel catalyst, is blended at a 1:200 ratio with all liquid hydrocarbon fuels. It has been tested extensively over the past 15 years and has proven to be successful in acting as a catalyst on the hydrocarbon chains in the fuel so that more of the energy is available upon burning. Unlike detergent additives which wash away unburned deposits, Dipetane treatment allows the asphaltines in the fuel to be fully oxidized thus giving an enhanced energy release. Because Dipetane burns more of the fuel, soot and carbon deposits are eliminated. Dipetane treated fuel burns at lower temperature reducing NOx and SOx emissions. It can be added into either the vehicle fuel tank or bulk storage tank and mechanical mixing is not required. Analysis carried out by the Irish Scientific Research Agency show Dipetane to create no extra wear on an metal, rubber, or plastic engine components.

Dipetane is registered with the Environmental Protection Agency (EPA). Gas Technology Services, an approved Australian Gas Association testing laboratory, tested Dipetane treated diesel fuel from April 2000 to November 2000 to assess the capabilities of Dipetane to reduce both fuel consumption and emissions. The following results with the following results:

- STAGE 1 – Sampling and on-line analysis of exhaust gases – prior to the addition of Dipetane
- STAGE 2 – Sampling and on-line analysis of exhaust gases – after the addition and ongoing use of Dipetane for 8 months.

The fully detailed independent findings from this study show a significant reduction in emissions between Stage 1 and Stage 2. Testing was completed at 0 RPM (idle) and 2000 RPM. The results are summarized as follows:

Emission Type	Maximum % Reduction Achieved
Carbon Dioxide - CO ₂	23%
Carbon Monoxide - CO	9.50%

Nitrogen Oxides - NOx	35.40%
Sulphur Oxides - SOx	26.80%
Smoke Density - Opacity	61.50%

The planned biodiesel production facility will be established by purchasing an existing abandoned facility to retrofit for biodiesel production or constructing a new facility in the Eastern Arkansas Mississippi River Delta region, most probably Phillips County. The facility will have the capacity to produce up to 30 million gallons of biodiesel per year, doubling the current annual production of such fuel in the United States. With guidance and assistance from the Arkansas Department of Environmental Quality and the Arkansas Department of Economic Development, two separate facilities have already been identified as potential retrofit candidates.

Since 1993, under the Arkansas Brownfields Program, Arkansas Code 8-7 Subchapter 11, the EPA has provided over \$250 million in Brownfields funding for cleanup and economic redevelopment of similar sites. Redevelopment of such a facility will not only serve to prevent further environmental damage to the site but pump economic life back into this distressed area. An engineering study for the retrofitting of an existing abandoned plant will be conducted to determine the feasibility of accomplishing such a project. The outcomes of this study will not only serve as a guide for fulfillment, but will also have implications for similar locations nationwide.

In preparation for taking the facility online, marketing research will be conducted in conjunction with other biodiesel manufacturers and agricultural engineers nationwide, leading to the composition of a marketing plan written to encompass not only the sale of biodiesel but the sale of all byproducts produced during the manufacturing process. All available information on current legislation, governmental incentives, benefits, contracts, permits, legal issues and funding opportunities pertaining to the production of biodiesel will be researched. Industry accepted practices related to site acquisition, machinery equipment specification and sourcing, storage and handling equipment, and laboratory equipment and supplies will be determined and evaluated throughout this process.

RELEVANCE TO FUNDING PRIORITIES

Arkansas is a prime location for the construction of a biodiesel facility, with all of the necessary components readily available. The feasibility of producing biodiesel in Arkansas is greatly enhanced by the availability of raw products necessary to produce biodiesel, the availability of labor, and the accessibility of many forms of transportation. Long-term poverty and job deterioration in the Delta region, specifically Phillips County where the poverty level was 32.7% in 1999, coupled with its rich array of renewable resources and agricultural knowledge, makes this a particularly interesting and necessary location for initiating economic and community development.

Arkansas ranks ninth in the United States for the production of soybeans with the vast majority of the crops being grown in the eastern Delta region. More than 6,800 Arkansas soybean farmers produce about 110 million bushels on 3.5 million acres of farmland. 33% of the

annual production is processed in Arkansas into raw components leaving the remaining non-crushed beans to be shipped to port areas. The eastern region of Arkansas is well served by all modes of transportation, including ports and airports, pipelines, rail and trucking. Arkansas is fortunate to have the soybean producing counties on or close to three major rivers to facilitate transportation down to New Orleans, La.

Due to these significant challenges and opportunities, a group of proven leaders in the construction, manufacturing, marketing and testing of biodiesel have joined together to initiate this project. They have identified existing abandoned facilities for potential retrofit to methyl ester biodiesel production from vegetable oil that will now only allow for low cost capital development, but also potentially serve as a prototype for hundreds of similar locations across the United States. It is based on published academic reports and extends those concepts into an integrated, continuous high throughput process.

The types of equipment planned for use, particularly the use of a continuous extraction column and early removal of the excess alcohol, are especially innovative. The ability to operate in either batch or continuous mode will permit the facility to maximize production even when equipment is temporarily removed from service for maintenance. Specific development needs include validation of reaction kinetics, validation of separation processes, validation of purification methods, and impact and recovery from process upsets.

Waves of legislation and air quality management agreements established in 1999 and continuing to evolve today is significantly increasing the demand for biodiesel throughout the United States. Published estimates suggest that at least five billion gallons of biodiesel fuel will be needed by 2012. With current United States production of clean biodiesel estimated at 15 million gallons this year, the addition of a 30 million biodiesel facility in Eastern Arkansas would increase biodiesel production in the United States by over 200%.

Initial production suggests that adding the fuel catalyst, Dipetane, to biodiesel shows promising effects for decreasing traditional biodiesel's NOx emissions. Establishing credible, scientific documentation of the effects of a biodiesel blended with Dipetane may lead to major public policy and industry standard changes, answering the pressing problem of NOx facing end-users of biodiesel while reducing all other emissions and increasing fuel mileage. The creation of an experimental farm to grow additional oilseed crops and potentially genetically engineer those crops for use with Dipetane in biodiesel also adds a significant research component to our efforts. The research associated with this production could expand the public policy implications, determining the most effective and efficient means of creating clean biodiesel. Additionally, findings will increase the demand and opportunity for farmers nationwide to produce oilseed products for the production of clean biodiesel. For this project alone, over 1 million bushels of soybeans will be required to fulfill the planned facility's 30 million gallon production capacity. Some 1,500 square miles in the underutilized Eastern Arkansas Mississippi Delta region will be farmed, not including the additional development value surrounding lands will achieve. The formation of a biodiesel production facility in this region will serve as a catalyst for development in areas rich in untapped resources, starving for opportunities to rise above third world economic levels.

STATEMENT OF WORK PROJECT LEADERSHIP

Combustion Technologies, LLC, an Arkansas Limited Liability Company, will lead the collaboration of the Arkansas Delta Biodiesel Research Project in coordinating the various phases of planned research and production. Each partner will update Combustion Technologies regularly on project objective progress through a series of meetings, interactions, and written reports. The company will supply the Dipetane necessary for clean biodiesel production and recruit and review proposals of the different partners necessary to see the project to successful completion. Additionally, Combustion Technologies may provide financing where necessary, possible and appropriate to support initial phases of the project.

ENGINEERING/ CONSTRUCTION ANALYSIS

Lurgi PSI is a leading provider of engineering services and plant construction in the fields of renewable resources, food processing, and chemicals on a turnkey basis. Lurgi has been enlisted to provide the design, procurement, and construction of the biodiesel facility in Eastern Arkansas if the study proves the facility to be feasible. The pre-engineering study will include project development, process design, detailed design, equipment procurement, general contracting specialty fabrication, cost accounting and start-up assistance.

Preliminary engineering design for the feasibility study would produce the following information:

- Process flow diagrams with material balance
- Preliminary equipment specifications and guide drawings
- Preliminary instrument list and specifications
- Preliminary piping and insulation specifications
- Preliminary project site map and equipment layout
- Preliminary Civil Structural design criteria
- Preliminary control system specification and architecture
- Preliminary definition of site utility and site infrastructure
- Preliminary definition of environmental permit requirements

The new production facility would manufacture methyl esters from soybean oil. The facilities proposed by Lurgi PSI are:

Deacidification of Degummed Soybean Oil	104,000 metric tons/yr
Transesterification of Treated Soy Oil	100,000 metric tons/yr
Methyl Ester Drying	100,000 metric tons/yr
Glycerin Water Pretreatment	30,000 metric tons/yr
Glycerin Water Evaporation	12,500 metric tons/yr
Pharmaceutical Grade Glycerin	9,300 metric tons/yr

SITE DEVELOPMENT

Helena-West Helena/Phillips County Port Authority operates the United State's largest new slackwater facility, sixty-five miles south of Memphis, TN, at mile marker 652 on the Mississippi River. Four and one half miles of slackwater frontage and over one mile of fast water

frontage is included in Helena Harbor's 4,000 acre 26 million dollar industrial park. This ideal inland harbor has turning areas and fleeting facilities that are two and one fourth miles long, 300 feet wide and nine feet deep. It has full utilities, interstate highway access, a major oil pipeline, and the industrial park is serviced by rail. The Port Authority has all of the facilities necessary for operation of grain storage, grain processing, and biodiesel manufacture. The Port Authority has been a moving force in bringing the biodiesel potential to the attention of the area agriculturists.

The Port Authority has taken the lead in providing the site for the biodiesel plant and will make available 20 acres of land for the development of a plant in the slackwater facility.

PRODUCT DEVELOPMENT/FARMERS COOPERATIVE FORMATION

Delta Regional Energy Development Group, LLC, is a public benefit corporation formed under Arkansas Act 1147 of 1993, the Nonprofit Corporation Act. The principal purpose of the company is to create interest in, and attract to the Delta areas in Arkansas and surrounding states, economic growth which will have a value-added impact upon the agricultural economy. This would include the feasibility of producer cooperatives, ethanol and biodiesel production, additional grain storage and processing facilities and additional crops for increased production.

The Group will provide technical support and aid in the fundraising processes related to environmental improvements and agricultural research, supporting the development of the Farmer's Blend Cooperative, a group of Delta regional farmers collaborating to grow oilseed crops for the production of biodiesel. The formation of the Farmers Blenders Cooperative will give rise to the eventual construction of the grain storage terminal and soybean oil extrusion plant.

MARKET ANALYSIS

An extensive market analysis will be performed by West Central Soy, a seventy-five year old Iowa-based corporation that has been producing and marketing biodiesel since 1996. In that time, West Central Soy has developed a nationwide network of biodiesel distribution that is currently utilized to channel their present biodiesel production capacity of 12 million gallons into the diesel market. They market biodiesel production from other manufacturers to meet demand in various regions of the country and exports to several countries. Two West Central Soy Representatives are working closely with the petroleum industry to develop an extended sales force that provides biodiesel fuel blends to the diesel fuel consumer. This biodiesel marketing model developed by West Central is being employed successfully with plans to expand the marketing to meet growing demand.

West Central Soy will utilize this distribution network to assist the Arkansas biodiesel facility to provide a market outlet for their production. The company will perform a market analysis and provide support and research pertaining to marketing and sales, market development, distribution and logistics, risk management, transaction processing, and byproduct marketing. West Central Soy will provide the biodiesel production technology to ensure reliable supply of high quality biodiesel.

TESTING AND RESEARCH

Southwest Research Institute in San Antonio, Texas, a nationally recognized, independent nonprofit corporation will research the addition of a proven fuel catalyst, Dipetane, to biodiesel in order to reduce the current problem of an increase in NO_x during the combustion of biodiesel. This will aid in the development of a new product, which will address the remaining negative facing the biodiesel industry, and enhance the economic viability of biodiesel usage. In addition to biodiesel production, the fuel catalyst, Dipetane, will also be manufactured on-site. The fuel catalyst is mixed in a 1:200 ratio with a fossil fuel based carrier oil. Southwest Research Institute will be researching the possibility of using biodiesel as the carrier oil. This possibility opens up a wide range of interactions between the biodiesel industry and the petrochemical infrastructure.

Southwest Research Institute is not affiliated with any government agency, educational institution, or corporate entity, nor does it endorse products or services. The Institute will conduct an emissions screening test of Dipetane-treated fuels against baseline or reference fuels composed of biodiesel. The program of tests may include the following:

- Baseline Fuel (Fuel R)
- Dipetane Treated Baseline Fuel (Fuel C1)
- Dipetane + Baseline Fuel as 80% fuel, 20% biofuel (B-20) (Fuel C1)
- Dipetane Treated B-20 (Fuel C3).

Southwest Research Institute has proposed that these fuels be run in the order of RRR, C1C1C1 on Day 1, and C2C2C2 C3C3C3 on Day 2, where each symbol ("R") represents a "hot-start transient run" for HC, C, NO_x, CO₂ and PM over a period of two days of testing. Fuel economy in terms of lb/hp-hr will be established by carbon balance.

A hot-start transient run is essentially a process defined in the CFR Title 40, Part 86, Subpart N for measuring regulated emissions from a heavy duty diesel engine. Southwest Research routinely runs this procedure as part of our work for EPA and engine OEM, as well as others with the need for emission data. The expected result of this testing will be the significant reduction of NO_x in biodiesel treated with "Dipetane." This expectation is based upon the results of extensive testing of diesel treated with "Dipetane." Southwest Research will also do a comparison of biodiesel and carrier oils, such as Telura 619, to determine the feasibility of using biodiesel instead of fossil fuel based carrier oils.

RETROFIT ANALYSIS

Chemical Engineer, Donald Malcolm, will provide expertise in the determining the feasibility of retrofitting an existing abandoned chemical facility in Helena, Arkansas, Cedar Chemical Plant. His experience as the former Senior Production Engineer at the offline facility (both design and implementation experience) will make him an invaluable part of the team. It is anticipated that an existing facility will require significantly less design engineering and construction and can more quickly be brought to start-up than building a new facility from the ground up. This creative and imaginative retrofitting analysis will demonstrate a low cost approach to the production of biodiesel. After initial laboratory testing, the retrofitting process

will be adapted to a plant trial, eventually scaling-up to commercial production. The Cedar Chemical Plant is unique in that it can be operated either continuously or in a batch mode. This dual production capability will allow for experimental innovations to validate new concepts as they are devised, without impacting standard daily production.

MONITORING AND EVALUATION

Combustion Technologies will lead partners in an on-going monitoring and evaluation of the project's feasibility and progress. Initial expectations suggest a 9-12 month timeline for securing site acquisition, determining retrofit capabilities; conducting market analysis, testing products, and establishing the agricultural development schedules. Combustion Technologies will conduct regular meetings and site visits with partners, comparing accomplishments of the activities related to each project objective in addition to any reporting requirements established by funders.

Assisting in this task will be the International accounting and financial consulting firm of Moore, Stephens & Frost, which is also known as MSF Financial Group. It will provide ongoing research and evaluation assistance. The seventy year old Little Rock law firm of Eichenbaum, Liles & Heister, p.a., will provide all legal research and technical assistance that will be required. And the accounting firm of Johnson & Associates, p.a., which for more than thirty-five years has represented industrial, agricultural, and mining clients, will provide audit and accounting services for the project.

At the end of the proposed project timeline, a written document with the following table of contents will be produced by the partnership to discuss the challenges and successes of the study and recommendations for the continuation of the project.

- I. Introduction and Scope of Work
- II. Engineering Study
 - A. Retrofitting of Cedar Chemical Plant
 - B. Construction Plan for New Biodiesel Facility
- III. Biodiesel Research and Development
 - A. New Product Development – Biodiesel/Fuel catalyst results
 - B. Carrier Oil Study
- IV. Demographic and Site Location Analysis
- V. Marketing Analysis
- VI. Legal and Legislation Study
 - A. Legal Structure of organization
 - B. Biodiesel Legislation and Incentives
- VII. Evaluation
 - A. Summary and Conclusions
 - B. Recommendations

This document will provide funders and potential investors with an understanding of the project's strengths, weaknesses, and public policy implications, detailing the approach for remedying challenges and enhancing production to ensure maximum environmental improvements and full operational capacity.

PART II. STATEMENT OF CAPABILITIES

❖ COMBUSTION TECHNOLOGIES, LLC

John H. Haley and his wife Cynthia are the principals of Combustion Technologies, LLC. Cynthia is a UAMS graduate, a licensed realtor, and a managing director of Combustion Technologies. Haley has held directorships in a number of Arkansas firms, including garment, wood products, and shoe manufacturing companies, and telephone and telecommunications companies. Some of the companies for whom he has served as counsel and director have grown from start up to over \$100,000,000 in annual sales. Haley is also a tax attorney and an industrial real estate developer. He has taught at the University of Arkansas Little Rock and the Arkansas Law School, and has been lead attorney in some of the great landmark cases of the past four decades. He is listed in most Who's Who publications and has the highest professional rating.

Combustion Technologies, LLC is the distributor of Dipetane, a fuel catalyst developed and long used in Ireland. It is also active in development of a simple engine using Nitinol bands in conjunction with heat from natural sources. The objective is to provide the means of pumping water, refrigerating foods, and meeting other needs in Third World countries.

The advisory board assists Combustion Technologies in the challenge of competing in the very competitive fuel industry. They provide guidance and feedback about the goals, objectives, and direction of this endeavor, enhancing the management team to bring about sound business knowledge and expertise. Our advisory board members have been selected based upon their business acumen, ability to create new business, and their overall knowledge and influence in the business world.

PRESENT ADVISORS

- John S. Haley, Senior Vice President for Acquisitions, Alltel, fifth largest Independent telephone and cellular company in the United States
- David C. Haley, Partner, HBK Holdings, Dallas, Texas, investment firm managing 3.5 billion dollars, former public securities attorney
- Drexel Martin, retired Vice President, Shell Oil, Houston, Texas
- Bob Pond VP Marketing, ORIX USA Corporation
- Richard McPherson Energy Technology and Development Consultant
- Morris Cranmer, PhD, Chemist and Toxicologist, Cranmer and Associates, former Director of the National Center for Toxicological Research
- Asa Morton, Owner, American Interplex Laboratories
- Steve Sanders, PhD, Graduate MIT, Plasma Physics, Owner NATCO

❖ LURGI PSI www.lurgipsi.com

Lurgi PSI is an integral part of an international engineering and technology group that has developed biodiesel and similar oleochemical projects around the world for several decades. They have an outstanding development record in terms of numbers of plants, production capacity, variety of feedstocks, and by-products. Lurgi biodiesel plants are a proven process with an operational history.

Lurgi PSI is a world leader in several specialized fields of engineering and construction due to its superior technology, innovation, and ability to meet the needs of the client in rapidly evolving industries. The vast resources of technology available through our relationship with Lurgi PSI will be a valuable asset in the feasibility study process. (See attached resumes for Josef Haeupl and Ray Jones)

❖ **DONALD W. MALCOLM** – dmalcolm@cox-internet.com

Chemical Engineer Donald Malcolm will provide expertise in the feasibility of retrofitting the Cedar Chemical Plant in Helena, Arkansas. If negotiations for the Cedar Chemical facility prove to be successful, his experience as Senior Production Engineer at the plant with both design and implementation experience will make him an invaluable part of the team. An existing facility will require significantly less design engineering and construction and can more quickly be brought to start-up. The creative and imaginative retrofitting of an existing plant will serve to demonstrate a low cost approach to the production of biodiesel. The feasibility study will allow for laboratory and initial process development. After initial laboratory testing, the process would be readily adapted to a plant trial with eventual scale-up to commercial production. The Cedar Chemical Plant is unique in that it can be operated either continuously or in a batch mode. This concept would allow for innovations to be tried on a plant scale to validate new concepts as they are devised. (See attached resume)

❖ **HELENA-WEST HELENA/PHILLIPS COUNTY PORT AUTHORITY**

To encourage the development of a new biodiesel facility in Phillips County, the Port Authority would agree make available its infrastructure and would contribute the use of land for construction of storage, processing and transportation facilities. In addition to all of these necessary components of the completed project, its sites would also be available as a biodiesel manufacturing plant location in the event that the retrofitting of Cedar Chemical plant becomes impractical.

❖ **DELTA REGIONAL ENERGY DEVELOPMENT GROUP**

Delta Regional Energy Development Group, Inc. is a Non-profit Arkansas Corporation formed to promote biomass material processing and manufacture, and to assist in the formation of local cooperatives of farmers which would provide the storage and processing facilities for these industries. Its Board of Directors consists of many of the leading farmers in the Phillips County region, as well as representatives of Combustion Technologies and the Helena/West Helena Phillips County Port Authority. These farmers raise soybeans, cotton, corn, wheat, grain sorghum, and milo.

❖ **WEST CENTRAL SOY** www.west-centralsoy.com

West Central was incorporated in 1933 in Ralston, Iowa, which is still its headquarters. They have been adding value to member soybeans since the 1940's. Employing 250 people, West Central has annual sales of \$250 million. 27 million bushels of soy oil are processed into alkyl esters annually by West Central. Some of West Central Soy's valued customers include the US military, US Department of Defense, National Parks, MFA Oil, Walmart, and hundreds of B20 fleets across the United States.

GARY HAER – Biodiesel Sales and Marketing Director, Vice President National Biodiesel Board. Has increased sales from 0 to 2 million gallons with projected sales in 2003 of 5-6 million gallons.

MYRON DANZER – Biodiesel Plant Manager, National Biodiesel Board National Accreditation Committee

NILE RAMSBOTTOM – Executive Vice President Soy Division

❖ **SOUTHWEST RESEARCH INSTITUTE www.swri.org**

Located on 1200 acres in San Antonio, Texas, Southwest Research Institute has state-of-the-art equipment and facilities. Southwest Research Institute performs applied contract research and development and encourages technology transfer. Almost two million square feet of laboratories, offices and test facilities support work on almost 1500 client projects each year. Southwest Research has a wide range of technical competencies and breadth. Its 2800 staff members in 11 technical divisions have expertise in such areas as chemistry, space sciences, nondestructive evaluation, automation, engine design, mechanical engineering, electronics and more. The Institute can assemble a multidisciplinary team of experts required by any technical project. The Fuels Analysis Laboratory in the Emissions Research Division will be conducting the emissions testing on Dipetane treated biodiesel. This Division offers virtually every standard industry test.

❖ **UNIVERSITY OF ARKANSAS DIVISION OF AGRICULTURE www.agriculture.org**

The mission of the University of Arkansas Division of Agriculture is to provide research-based information to help Arkansans improve their economic well-being and the quality of their lives. They offer advice on a number of subjects related to specialty enterprises including, planning, enterprise budgets, production, marketing and value added products.

❖ **ARKANSAS DEPARTMENT OF ECONOMIC DEVELOPMENT www.aedc.state.ar.us**

The Arkansas Department of Economic Development is committed to providing a team of business development professionals to bring better jobs to the people of Arkansas. The Community Development Section focuses on technology in the energy field addressing alternative sources of power and fuels and will offer support in the following areas:

- Building and Sites
- Financing
- Incentives
- Export assistance
- Business development
- Technology assistance
- Permits

**PROFESSIONAL
PROFILE**

JOSEF HAEUPL

EXPERIENCE

Director of Technology and Engineering

- **Director Technology, Lurgi PSI, Memphis, TN and Lurgi Life Sciences, Bad Bubendorf, Switzerland. Business development and front-end engineering including feasibility studies and business planning.**

Selected Projects:

Feasibility, conceptual and preliminary engineering for a BioDiesel Production Facility at Southern States Power Company, Riverside CA. Various studies to evaluate and compare alternative feedstock and process routes applicable in the BioDiesel Industry. Usable feed materials include vegetable oils, beef tallow, greases (yellow grease, brown grease), recycled fryer oils and Soapstock from oil refining.

- **Director Technology, Pharmaplan GmbH, Bad Homburg, Germany and Pharmaplan N.A., Philadelphia, PA Focussing on business development and front-end engineering.**

Selected Projects:

Conceptual through detailed engineering for a GMP compliant API Technikum at Byk Gudden, Singen, Germany. Feasibility study for a GMP compliant API Manufacturing facility at Transopharm, Hamburg, Germany.

- **Manager of Engineering, Lonzagroup, Fair Lawn, NJ. Head of engineering for all of Lonza's sites in the US, including Lonza's Oleochemical sites in Painesville, OH, Williamsport, PA, and Mapleton, IL. Activities included feasibility evaluation, engineering, procurement, construction supervision as well as project management and start-up services.**

Selected Projects:

Fatty Acid Distillation System in Painesville, OH (1998) Various de-bottlenecking projects in Painesville, OH (1995-1997), including

PROFESSIONAL PROFILE

Page 2 of 2

EXPERIENCE (cont.)

JOSEF HAEUPL

Hydrogenation, Fatty Acid Splitting and Glycerin Processing. Expansion of Lonza's Ester Facility in Williamsport, PA (1997), from feasibility study to implementation, including Esterification, Ethoxylation, Spray Drying and Packaging systems. Batch Distillation System for Alcohols, Fatty Acids and Amines in Mapleton, IL (1988) Crystalline Sorbitol Production Plant in Mapleton, IL (1985) Responsible for in-house process development, design, installation and start-up of the facility. Site Development Planning for all Lonza sites in the US. Review and alignment of all site related activities with the corporate business plan for the Lonza Group's sites, including Painesville OH, Williamsport PA, Mapleton IL as well as Bayport TX, Conshohocken PA, Los Angeles CA and Long Beach CA.

EDUCATION

MBA in Management, Fairleigh Dickinson University, College of Business Administration, Teaneck, NJ

Engineering Certificate, Dipl.-Ing. (FH) in Mechanical Engineering, State College Aalen, Aalen, Germany

PROFESSIONAL AFFILIATION

American Oil Chemist's Society (AOCS)
International Society of Pharmaceutical Engineering (ISPE)
German Association of Engineers (VDI- Verein Deutscher Ingenieure)

PROFESSIONAL PROFILE

RAY JONES, P.E.

EXPERIENCE

Project Management

- Managed multiple plant projects for a major chemical corporation from concept through design and construction.
- Project Manager in the Corporate Engineering Division for a specialty chemical corporation. Managed capital projects from conception to mechanical completion and start-up. Responsibilities included capital cost and schedule control. Working relationships were maintained with contractors, manufacturing personnel, customers, and regulatory agency personnel.
- Senior Process Engineer, Interim QA/QC Supervisor, and an Engineering Supervisor for a specialty chemical corporation. Managed capital projects and small group of engineers and draftsmen.
- Project Engineer, Maintenance Engineer, Area Process Engineer, Process Engineer, Senior Process Engineer, and Production Supervisor for a specialty chemical company. Managed capital projects, scheduled maintenance, designed process improvements, and managed up to 27 employees in manufacturing of solid product. Processes included handling of solids, liquids, and gases.
- Completed a \$54 million capital expansion which included a new 200,000 lb/hr boiler, plus the following new process facilities:
 - 208,000 SCFH hydrogen plant
 - 30 million pound per year polymer additives plant
 - Pre-treatment process for Furfural
 - A Tetrahydrofuran production facility
 - A wastewater stripping and treatment facility
 - Miscellaneous plant utility system

PROFESSIONAL PROFILE

PAGE 2 OF 3

RAY JONES, P.E.

EXPERIENCE

- Designed and installed facilities for production of 4 million pounds per year of paper sizing agent for proprietary customer. \$3.3 million capital. Later debottlenecked production to 7.3 million pounds for \$1.4 million capital.
- Designed and installed facilities for production for low toxicity pesticide for livestock application for proprietary customer. \$3.4 million capital. Included toxic fume incinerator.
- Designed and constructed semi-works facility for manufacture of proprietary chemical for a specialty chemical facility. Final product, raw materials and intermediates control required extraordinary containment measures due to extreme toxicity. Manufactured the purest product customer had seen during technology development.
- Designed and constructed facilities using existing equipment for toll manufacture of brominated specialty chemical for a specialty chemical facility.
- Designed and constructed facilities for toll purification of organic agricultural chemical for Rhone Poulenc. Removed impurity allowing product to meet customer specifications.
- Designed and constructed 600 gpm industrial wastewater treatment facility for widely variable plant wastewater quality. System featured unique design for pH control. Final effluent disposal was by underground injection well.
- Designed and constructed facilities for toll manufacture or proprietary agricultural chemical for a specialty chemical company. Designed for 12,000 pounds per day and produced over 16,000 pounds per day of product.
- Designed and constructed facilities using existing equipment for toll manufacture or proprietary organic chemical for a specialty chemical company. Process required safe unloading and handling of organic isocyanate compound and drying of final powdered product under intense vacuum.

**PROFESSIONAL
PROFILE**

PAGE 3 OF 3

RAY JONES, P.E.

EXPERIENCE

- **Managed \$35 million environmental remediation project covering pond closures, landfill closures, and soils and groundwater remediation. Project included above ground treatment facilities.**

EDUCATION

**Bachelor of Science in Chemical Engineering
University of Arkansas
Fayetteville, Arkansas**

TRAINING

**Professional Engineers License
State of Tennessee**

**Fundamentals of Successful Project Management
Memphis**

**Conflict Resolution Seminar
Memphis**

**Questimate Cost Estimate
Bethesda**

**OSHA 40 Hour Training
Memphis**

**NIOSH 40 Hour Course
Philadelphia**

**Economic Principles
St. Louis**

Donald W. Malcolm
312 North 7th St.
West Helena, AR 72390
Home Phone (870) 572-9462
Email: dmalcolm@cox-internet.com

SUMMARY

Highly skilled, flexible and motivated chemical engineer with more than 20 years of extensive operations, engineering, and supervisory experience in world-class chemical facilities. Team player with broad experience in both continuous and batch processes. Extensive experience in environmental control, quality improvement, distillation, fluid flow, heat transfer, metallurgy and mass & material balances. Highly skilled in process definition, optimization and improvement methods focused on safety, environmental compliance and operability. Highly developed cost control and budgeting skills targeted toward maximum return on investment. Intimate knowledge of injury management and prevention processes. Skilled in both oral and written communications as well as in the use of PC's for productivity enhancement and business analysis (AutoCad LT, Visio, MS Office, Lotus).

OBJECTIVE

To obtain an interesting and challenging engineering position in the chemical manufacturing industry allowing me to use my skills in chemical process improvement, plant operations, design and problem solving and to deepen and broaden my experience base. To afford the opportunity to further develop my skills in business evaluation and development.

WORK HISTORY

Plant Engineer, Cypress Chemical Co., Helena, AR (2002-Present)

Managed capital projects in excess of \$500K. Designed and managed on time and in budget installation of a new sludge handling process. Developed economics for conversion of plant to direct purchase of natural gas and implemented conversion, including negotiation of gas purchase and transportation contracts. Developed and implemented detailed raw materials monitoring process. Responsible for coordination with consultants and contractors for plant storm water monitoring and air permit testing. Identified and developed product treatment process to reduce odor and dust.

Senior Production Engineer, Cedar Chemical Corp., West Helena, AR (2000-2002)

Organizational realignment during restructuring that placed focus on operational problem solving and troubleshooting skills. Oversee the activities of three process engineers to establish priorities and coordinate engineering manpower. Coordinate turnarounds between custom manufacturing projects, monitor production yields and identify and implement improvement opportunities, develop and review P&I diagrams, write and teach operating procedures. Designed and implemented change from batch process to semi-continuous process resulting in 80% increase in throughput at no capital expense. Identified process changes to a 4-step batch process resulting in an increase in throughput of 30% with minor capital requirements. Designed and implemented an impurities purge system saving approximately \$60K over 120 day campaign with more consistent control of product quality.

Production Manager, Cedar Chemical Corp., West Helena, AR (1999-2000)

Responsible for the day-to-day operations of three chemical process units and packaging warehouse including troubleshooting and engineering improvements. Supervise a team of 38 operators, 4 shift supervisors, a packaging supervisor and one Production Superintendent. Successfully managed process start-ups for 6 custom projects in a 1 year span. Work with process engineers to finalize process designs for the custom units. Key client contact for custom projects. Work extensively with support groups to improve the physical plant. Coordinate with marketing and logistics to insure raw material and product availability. Recognized "change agent." Initiated, chaired, and championed multiple problem solving teams to address key operational and management concerns including operator skills progression and product quality improvements. Manage personnel development in area, identifying needs and developmental opportunities for both supervisors and operators.

Sr. Process Engineer, Cedar Chemical Corp., West Helena, AR (1997-1999)

Responsible for all process engineering projects in two custom batch chemical production units. Successfully managed start-up and operation of 3 custom projects resulting in improved yields (up to 30%), decreased rework and lower costs. Work closely with client representatives in the development, start-up, and operation of custom projects. Identify, develop, and implement process modifications for reducing costs, increasing efficiencies, and improving quality. Conduct custom process reviews to analyze "fit" and operational economics; develop initial process design. Conduct major incident investigations including root cause analysis, corrective action recommendations, and coordinate follow-up. Responsible for the development, communication and document control of operating procedures for units. Conduct hazard reviews, with documentation, of all process changes. Identified key control point in unit operations resulting in a 1/3 reduction in manufacturing costs with a 20% increase in production. Developed and implemented manufacturing cost model to aid in real time decision making. Directed custom process start-up in record time with improved performance. Negotiated raw material and conversion yields with client.

Owner/President, White River Investments, Inc., Rose Hill, KS (1995-1997)

Created holding corporation to purchase and operate a retail dry cleaning business. Operated and managed multi-location business employing 14. Handled all day-to-day functions of business including bookkeeping, advertising, production, environmental control, customer service and maintenance. Turned business from questionable profitability to solid financial performance. Developed key client relationships resulting in increased repeat business by exemplary customer service. Sold business at a substantial return.

Production Superintendent, Vulcan Chemicals, Wichita, (1991-1995)

Managed area of four production units with 42 operators, 5 shift supervisors, 3 day supervisors and an engineer. Responsible for production volumes, quality and cost control. Responsible for planning and implementation of OSHA process safety requirements, ISO 9000 certification of all products, environmental compliance, and TQM initiatives. Our department was awarded President's Quality award two years in a row. Completed OSHA PSM activities ahead of schedule. Participant on inter-company team with major customer to identify needs and provide support. Department attained and maintained ISO certification on all products. Performed day-to-day process troubleshooting. Developed comprehensive corrosion control program leading to an annual cost reduction of \$1MM. Led plant team for employee recognition and safety performance. Developed process to augment safety performance in addition to plant safety process. Conducted business analysis of process unit

resulting in decision to cease that operation. Department established numerous all-time production records. Developed, implemented and monitored annual budgets of approximately \$30MM.

Operations Manager, American MicroTrace Corp., Fairbury, NE (1990-1991)

Site manager for small agricultural micronutrients production facility. Full P&L responsibility for site employing 28 personnel with an annual budget of \$10MM. Developed and implemented effective safety process. Effectively reduced incidence and severity of injuries by instituting management controls. Developed and implemented effective management process by defining responsibilities and instituting controls. Instituted use of SPC to begin definition of process capabilities.

Production Superintendent, Vulcan Chemicals, Geismar, LA (1978-1990)

Responsible for all facets of production, safety, and maintenance. Supervised departments of up to 22 operators, 5 shift supervisors and 2 day foremen with annual budgets up to \$25MM. Departments routinely established production, safety, and on-stream time records. Managed interdisciplinary team to debottleneck process and increase capacity by 50%. Developed fundamental cost projection methods for processes. Member of multi-site team which developed corporate environmental release prevention policy. Founding member of plant Quality Council. Created inter-company communications team to coordinate pipelined product movements between four different companies. Company representative for international technical group, presented paper at international conference. Wrote and taught operating procedures.

EDUCATION

1977	B. Ch. E., Georgia Institute of Technology
1977	EIT Certified – State of Georgia
1987	Deming Quality Process, Hertz Group
1995	Butler County Community College, misc. course work

BUDGET

Statement of Work	Cost	Contribution (in-kind)
Engineering Study		
A. Lurgi PSI (detail attached)	\$200,000	\$100,000
B. Don Malcolm (detail attached)	518,500	50,000
Research Study		
Southwest Research Institute (detail attached)	25,000	0
Combustion Technologies 2000gal. Dipetane @\$10 (market price)	20,000	20,000
University of Arkansas Experimental Farm	0	0
Site Location New Biodiesel facility/ Retrofit of Plant		
Helena Port Authority 20acre Syr. Lease	200,000	200,000
Cedar Chemical Retrofit	100,000	0
Arkansas Department of Economic Development	0	0
Marketing Study		
West Central Soy	75,000	50,000
Arkansas Department of Economic Dev.	0	0
Legislative/Legal Research		
Moore, Stephens and Frost (detail attached)	48,000	18,000
Eichenbaum Law Firm (detail attached)	120,000	50,000
Support Services		
Johnson and Associates, CPA (detail attached)	78,000	28,000
Combustion Technologies, LLC (detail attached)	375,000	275,000
TOTAL COSTS	\$1,759,500	\$791,000
TOTAL GRANT REQUESTED	\$968,500	

NOTE: The project Term is five calendar Quarters, commencing August 2003, or when funded, whichever is later. The tests, pre-engineering studies, initial retrofit expense, site location, and research and planning will be completed in the first two quarters. The remaining expense will be incurred rateably over the life of the project.

BUDGET: LEGISLATION/LEGAL RESEARCH

MOORE, STEPHENS & FROST, P.A., C.P.A.s TOTAL \$48,000

Tom Gibbons of the Little Rock, Arkansas, office will be in charge. He is a senior partner in the firm. The firm will assist in identifying and quantifying the incentives offered by states and the federal government for the use of biodiesel products. Gibbons' billing rate is \$250 an hour, and he will be aided by assistants whose rates range from \$80 an hour to \$175 an hour. Their estimate of time required is 300 hours, at a blended rate of \$160 an hour.

EICHENBAUM, LILES & HEISTER, P.A. ATTORNEYS TOTAL \$120,000

Eichenbaum Firm is a seventy year old Little Rock law firm specializing in commercial and financial matters. Charles McDaniel, attorney and C.P.A., will be in charge of the project. The firm will identify and quantify the incentives offered by state and federal agencies for the use of biodiesel products specifically, and for the use of products which decrease emissions, including biodiesel. The firm will also research the permits required for biodiesel plant installation and production, transportation of biodiesel by barge and pipeline, and qualification of the biodiesel facility for available tax credits and subsidies. The firm will form the farmers' cooperative which will produce the feedstock and operate the experiment farm. McDaniel's billing rate is \$200 an hour. Other lawyers and paralegals who will assist him have billing rates ranging from \$150 an hour to \$60 an hour. The firm estimates that the time required will be 800 hours at a blended rate of \$150 an hour.

BUDGET: SUPPORT SERVICES

JOHNSON & ASSOCIATES, C.P.A.s TOTAL \$78,000

The accounting firm of Johnson & Associates, of Little Rock, Arkansas, will provide accounting and audit services for the project out of its Little Rock, Arkansas, office. It will also make application for all permits and authorizations, and will file all reports required or needed. Michael B. Johnson of that office will be in charge. He is a senior partner in the firm. His billing rate is \$175 an hour. Others in the firm that will be working on this project have billing rates ranging from \$45 an hour to \$140 an hour. The firm estimates that the time required will be 650 hours at a blended rate of \$120 an hour.

COMBUSTION TECHNOLOGIES, LLC TOTAL \$275,000

The Applicant Combustion Technologies will provide the Project Director, who will be John Haley, President, and whose billing rate is \$250 an hour, his assistant Cynthia Haley, Vice President, whose charge is \$50 an hour, and a secretary to be selected and who will be paid a salary of \$5,000 per quarter. Travel is estimated at \$1,000 per month, supplies and miscellaneous expenses at \$1,000 per month, and rent of office space at \$1,333 a month. Haley estimates that Cynthia will be working full time on the project for five quarters, and that he will be devoting about 1,000 hours to the project over that same period of time. The total cost will be \$75,000 per quarter for the five quarters of the project duration.

	<u>1st Quarter</u>	<u>2nd Qtr.</u>	<u>3rd Qtr.</u>	<u>4th Qtr.</u>	<u>5th Qtr.</u>
Project Director	50,000	50,000	50,000	50,000	50,000
Rent	4,000	4,000	4,000	4,000	4,000
Assistant	10,000	10,000	10,000	10,000	10,000
Secretarial	5,000	5,000	5,000	5,000	5,000
Travel	3,000	3,000	3,000	3,000	3,000
Supplies, Misc.	3,000	3,000	3,000	3,000	3,000
Total	75,000	75,000	75,000	75,000	75,000

BUDGET: RESEARCH

SOUTHWEST RESEARCH INSTITUTE TOTAL \$25,000

The program of tests may include the following:

- Baseline Fuel (Fuel R)
- Dipetane Treated Baseline Fuel (Fuel C1)
- Dipetane + Baseline Fuel as 80% fuel, 20% biofuel (B-20) (Fuel C1)
- Dipetane Treated B-20 (Fuel C3).

Southwest Research Institute has proposed that these fuels be run in the order of RRR, C1C1C1 on Day 1, and C2C2C2 C3C3C3 on Day 2, where each symbol ("R") represents a "hot-start transient run" for HC, C), NOx, Co2 and PM over a period of two days of testing. Fuel economy in terms of lb/hp-hr will be established by carbon balance.

BUDGET: ENGINEERING

LURGI PSI TOTAL \$200,000

Lurgi PSI will do the pre-engineering report to include the following:

- Process flow diagrams with material balance
- Preliminary equipment specifications and guide drawings
- Preliminary instrument list and specifications
- Preliminary piping and insulation specifications
- Preliminary project site map and equipment layout
- Preliminary Civil Structural design criteria
- Preliminary control system specification and architecture
- Preliminary definition of site utility and site infrastructure
- Preliminary definition of environmental permit requirements

DON MALCOLM TOTAL \$518,500

Biodiesel Development Budget DON MALCOLM

Laboratory and Initial Process Development

		Monthly Expense	3-Month Total
Wages and Fringes			
Salaries			
Don Malcolm *		8000	24000
Contract Chemist	75.25 /hr	9030	27090
Lab Technician	30.00 /hr	3500	10500
Subtotal		20530	61590
Fringes			
FICA *		600	1800
Life and Med. Insurance *		750	2250
Subtotal		1350	4050
Consultant Expense			
Environmental Consultant		5000	15000
Subtotal		5000	15000
Travel			
Mileage		560	1680
Lodging		400	1200
Meals		350	1050
Airfare		1000	3000
Subtotal		2310	6930
Facilities			
Lab and Office (Rent)		2000	6000
Subtotal		2000	6000
Utilities			
Electricity		200	600
Phone		300	900
Water		75	225
Trash		50	150
Natural Gas		50	150
Subtotal		675	2025
Laboratory Expenses			
Parts		1000	3000
Analytic Gases		500	1500
Reagents		400	1200
Waste Disposal		500	1500
Lab Equipment (1x purchase)		5000	5000
Subtotal		7400	12200
Office Supplies			
Copier/Printer		200	600
Supplies		100	300
Subtotal		300	900

Biodiesel Development Budget DON MALCOLM

Laboratory and Initial Process Development

Contingency	(25%)	9891	27174
Grand Total		\$44,456	\$135,869

Biodiesel Development Budget

Plant Scale Production Test

		Monthly Expense	3-Month Total
Wages and Fringes			
Salaries			
Don Malcolm		8000	24000
Operations Supervisor		4000	12000
Operators (2)	\$15 /hr	5040	10080
Lab Technician	\$15 /hr	2520	7560
Subtotal		19560	53640
Fringes			
FICA		1467	4401
Life and Med. Insurance		3750	11250
Subtotal		5217	15651
Consultant Expense			
Environmental Consultant		10000	25000
Subtotal		10000	25000
Plant Trial Preparation and Support			
Mechanical Preparation			
Pipefitting	\$35 /hr	21000	28000
Elec. & Inst. Tech	\$35 /hr	4200	4200
Control System		7000	7000
Millwrights	\$35 /hr	7000	7000
Materials		15000	15000
Subtotal		54200	61200
Utilities			
Boiler rental		15000	30000
Chiller rental		15000	30000
Natural Gas		5000	5000
Water		250	250
Nitrogen		4000	4000
Subtotal		39250	69250
Facilities			
Plant Rental		10000	30000
Subtotal		10000	30000
Raw Materials and Wastes			
Oil		11000	11000
Methanol		525	525
Caustic		500	500
Waste Disposal		7000	7000
Subtotal		19025	19025

Biodiesel Development Budget

Plant Scale Production Test

Travel			
Mileage	560	1680	
Lodging	400	1200	
Meals	350	1050	
Airfare	1000	3000	
Subtotal	2310	6930	
Facilities			
Lab and Office (Rent)	2000	6000	
Subtotal	2000	6000	
Utilities			
Electricity	200	600	
Phone	300	900	
Water	200	600	
Trash	50	150	
Natural Gas	50	150	
Subtotal	800	2400	
Laboratory Expenses			
Parts	1000	3000	
Analytic Gases	500	1500	
Reagents	400	1200	
Waste Disposal	500	1500	
Lab Equipment (1x purchase)	0	0	
Subtotal	2400	7200	
Office Supplies			
Copier/Printer	200	600	
Supplies	100	300	
Subtotal	300	900	
Contingency	(25%)	41266	74299
Grand Total	\$206,328	\$371,495	

**APPLICATION FOR
FEDERAL ASSISTANCE**

OMB Approval No. 0348-0043

1. TYPE OF SUBMISSION: <input type="checkbox"/> Application <input type="checkbox"/> Construction <input checked="" type="checkbox"/> Non-Construction <input type="checkbox"/> Preapplication <input type="checkbox"/> Construction <input type="checkbox"/> Non-Construction		2. DATE SUBMITTED May 15, 2003	Applicant Identifier														
		3. DATE RECEIVED BY STATE	State Application Identifier														
		4. DATE RECEIVED BY FEDERAL AGENCY	Federal Identifier														
5. APPLICANT INFORMATION																	
Legal Name: Combustion Technologies, LLC		Organizational Unit: Main office - Little Rock, Arkansas															
Address (give city, county, State, and zip code): P.O. Box 3730 Little Rock, Arkansas 72203		Name and telephone number of person to be contacted on matters involving this application (give area code) John or Cynthia Haley 501-225-9125															
6. EMPLOYER IDENTIFICATION NUMBER (EIN): <div style="border: 1px solid black; padding: 2px; display: inline-block;">7 1 - 0 8 3 0 4 6 8</div>		7. TYPE OF APPLICANT: (enter appropriate letter in box) <div style="float: right; border: 1px solid black; padding: 2px; margin-left: 10px;">m</div> <table style="width:100%; font-size: small;"> <tr> <td>A. State</td> <td>H. Independent School Dist.</td> </tr> <tr> <td>B. County</td> <td>I. State Controlled Institution of Higher Learning</td> </tr> <tr> <td>C. Municipal</td> <td>J. Private University</td> </tr> <tr> <td>D. Township</td> <td>K. Indian Tribe</td> </tr> <tr> <td>E. Interstate</td> <td>L. Individual</td> </tr> <tr> <td>F. Intermunicipal</td> <td>M. Profit Organization</td> </tr> <tr> <td>G. Special District</td> <td>N. Other (Specify) _____</td> </tr> </table>		A. State	H. Independent School Dist.	B. County	I. State Controlled Institution of Higher Learning	C. Municipal	J. Private University	D. Township	K. Indian Tribe	E. Interstate	L. Individual	F. Intermunicipal	M. Profit Organization	G. Special District	N. Other (Specify) _____
A. State	H. Independent School Dist.																
B. County	I. State Controlled Institution of Higher Learning																
C. Municipal	J. Private University																
D. Township	K. Indian Tribe																
E. Interstate	L. Individual																
F. Intermunicipal	M. Profit Organization																
G. Special District	N. Other (Specify) _____																
8. TYPE OF APPLICATION: <input checked="" type="checkbox"/> New <input type="checkbox"/> Continuation <input type="checkbox"/> Revision If Revision, enter appropriate letter(s) in box(es) <input type="checkbox"/> <input type="checkbox"/> A. Increase Award B. Decrease Award C. Increase Duration D. Decrease Duration Other(specify): _____		9. NAME OF FEDERAL AGENCY: United States Department of Agriculture															
10. CATALOG OF FEDERAL DOMESTIC ASSISTANCE NUMBER: <div style="border: 1px solid black; padding: 2px; display: inline-block;">8 1 - 0 8 7</div> TITLE: _____		11. DESCRIPTIVE TITLE OF APPLICANT'S PROJECT: ARKANSAS DELTA BIODIESEL RESEARCH PROJECT															
12. AREAS AFFECTED BY PROJECT (Cities, Counties, States, etc.): EASTERN ARKANSAS																	
13. PROPOSED PROJECT		14. CONGRESSIONAL DISTRICTS OF: ARKANSAS 1ST & 4TH															
Start Date 8/3/03	Ending Date 11/3/03	a. Applicant Combustion Technologies, LLC	b. Project BIODIESEL PRODUCT DEVELOPMENT AND PLANT														
15. ESTIMATED FUNDING:		16. IS APPLICATION SUBJECT TO REVIEW BY STATE EXECUTIVE ORDER 12372 PROCESS?															
a. Federal	\$ 968,500 ⁰⁰	a. YES. THIS PREAPPLICATION/APPLICATION WAS MADE AVAILABLE TO THE STATE EXECUTIVE ORDER 12372 PROCESS FOR REVIEW ON: DATE <u>05/15/03</u>															
b. Applicant	\$ 295,000 ⁰⁰	b. No. <input type="checkbox"/> PROGRAM IS NOT COVERED BY E. O. 12372 <input type="checkbox"/> OR PROGRAM HAS NOT BEEN SELECTED BY STATE FOR REVIEW															
c. State	\$ _____ ⁰⁰																
d. Local	\$ 296,000 ⁰⁰																
e. Other	\$ 200,000 ⁰⁰																
f. Program Income	\$ _____ ⁰⁰	17. IS THE APPLICANT DELINQUENT ON ANY FEDERAL DEBT? <input type="checkbox"/> Yes If "Yes," attach an explanation. <input checked="" type="checkbox"/> No															
g. TOTAL	\$ 1,759,500 ⁰⁰																
18. TO THE BEST OF MY KNOWLEDGE AND BELIEF, ALL DATA IN THIS APPLICATION/PREAPPLICATION ARE TRUE AND CORRECT, THE DOCUMENT HAS BEEN DULY AUTHORIZED BY THE GOVERNING BODY OF THE APPLICANT AND THE APPLICANT WILL COMPLY WITH THE ATTACHED ASSURANCES IF THE ASSISTANCE IS AWARDED.																	
a. Type Name of Authorized Representative JOHN H. HALEY		b. Title PRESIDENT	c. Telephone Number (501) 225-9125														
d. Signature of Authorized Representative 		e. Date Signed 5-15-03															

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Standard Form 424 (Rev. 7-97)
Prescribed by OMB Circular A-102

BUDGET INFORMATION - Non-Construction Programs

OMB Approval No. 0348-0044

SECTION A - BUDGET SUMMARY						
Grant Program Function or Activity (a)	Catalog of Federal Domestic Assistance Number (b)	Estimated Unobligated Funds		New or Revised Budget		
		Federal (c)	Non-Federal (d)	Federal (e)	Non-Federal (f)	Total (g)
1. Biomass Research	81-087	\$	\$	\$ 848,500.00	\$ 714,000.00	\$ 1,562,500.00
2.						0.00
3.						0.00
4.						0.00
5. Totals		\$ 0.00	\$ 0.00	\$ 848,500.00	\$ 714,000.00	\$ 1,562,500.00
SECTION B - BUDGET CATEGORIES						
6. Object Class Categories	GRANT PROGRAM, FUNCTION OR ACTIVITY				Total (5)	
	(1) Biomass Research	(2)	(3)	(4)		
a. Personnel	\$ 325,000.00	\$	\$	\$	\$ 325,000.00	
b. Fringe Benefits					0.00	
c. Travel	15,000.00				15,000.00	
d. Equipment					0.00	
e. Supplies	20,000.00				20,000.00	
f. Contractual	1,364,000.00				1,364,000.00	
g. Construction					0.00	
h. Other	35,500.00				35,500.00	
i. Total Direct Charges (sum of 6a-6h)	1,759,500.00	0.00	0.00	0.00	1,759,500.00	
j. Indirect Charges	0.00				0.00	
k. TOTALS (sum of 6i and 6j)	\$ 1,759,500.00	\$ 0.00	\$ 0.00	\$ 0.00	\$ 1,759,500.00	
7. Program Income		\$ 0.00	\$	\$	\$	0.00

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Prescribed by OMB Circular A-102

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SECTION C - NON-FEDERAL RESOURCES					
(a) Grant Program	(b) Applicant	(c) State	(d) Other Sources	(e) TOTALS	
8. Biomass Research and Development Initiative	\$ 295,000.00	\$ 0.00	\$ 496,000.00	\$ 791,000.00	
9. Federal				0.00	
10. Private				0.00	
11.				0.00	
12. TOTAL (sum of lines 8-11)	\$ 295,000.00	\$ 0.00	\$ 496,000.00	\$ 791,000.00	
SECTION D - FORECASTED CASH NEEDS					
	Total for 1st Year	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter
13. Federal	\$ 925,500.00	\$ 345,500.00	\$ 254,000.00	\$ 163,000.00	\$ 163,000.00
14. Non-Federal	714,000.00	141,000.00	390,000.00	94,000.00	89,000.00
15. TOTAL (sum of lines 13 and 14)	\$ 1,639,500.00	\$ 486,500.00	\$ 644,000.00	\$ 257,000.00	\$ 252,000.00
SECTION E - BUDGET ESTIMATES OF FEDERAL FUNDS NEEDED FOR BALANCE OF THE PROJECT					
(a) Grant Program	FUTURE FUNDING PERIODS (Years)				
	(b) First	(c) Second	(d) Third	(e) Fourth	
16. Biomass Research and Development Initiative	\$	\$	\$	\$	
17. Federal	43,000.00				
18. Private	77,000.00				
19.					
20. TOTAL (sum of lines 16-19)	\$ 120,000.00	\$ 0.00	\$ 0.00	\$ 0.00	
SECTION F - OTHER BUDGET INFORMATION					
21. Direct Charges: 1,759,500		22. Indirect Charges: none			
23. Remarks:					

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Standard Form 424A (Rev. 7-97) Page 2

ASSURANCES - NON-CONSTRUCTION PROGRAMS

Public reporting burden for this collection of information is estimated to average 15 minutes per response, including time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding the burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to the Office of Management and Budget, Paperwork Reduction Project (0348-0040), Washington, DC 20503.

PLEASE DO NOT RETURN YOUR COMPLETED FORM TO THE OFFICE OF MANAGEMENT AND BUDGET. SEND IT TO THE ADDRESS PROVIDED BY THE SPONSORING AGENCY.

NOTE: Certain of these assurances may not be applicable to your project or program. If you have questions, please contact the awarding agency. Further, certain Federal awarding agencies may require applicants to certify to additional assurances. If such is the case, you will be notified.

As the duly authorized representative of the applicant, I certify that the applicant:

1. Has the legal authority to apply for Federal assistance and the institutional, managerial and financial capability (including funds sufficient to pay the non-Federal share of project cost) to ensure proper planning, management and completion of the project described in this application.
2. Will give the awarding agency, the Comptroller General of the United States and, if appropriate, the State, through any authorized representative, access to and the right to examine all records, books, papers, or documents related to the award; and will establish a proper accounting system in accordance with generally accepted accounting standards or agency directives.
3. Will establish safeguards to prohibit employees from using their positions for a purpose that constitutes or presents the appearance of personal or organizational conflict of interest, or personal gain.
4. Will initiate and complete the work within the applicable time frame after receipt of approval of the awarding agency.
5. Will comply with the Intergovernmental Personnel Act of 1970 (42 U.S.C. §§4726-4763) relating to prescribed standards for merit systems for programs funded under one of the 19 statutes or regulations specified in Appendix A of OPM's Standards for a Merit System of Personnel Administration (5 C.F.R. 900, Subpart F).
6. Will comply with all Federal statutes relating to nondiscrimination. These include but are not limited to: (a) Title VI of the Civil Rights Act of 1964 (P.L. 88-352) which prohibits discrimination on the basis of race, color or national origin; (b) Title IX of the Education Amendments of 1972, as amended (20 U.S.C. §§1681-1683, and 1685-1686), which prohibits discrimination on the basis of sex; (c) Section 504 of the Rehabilitation Act of 1973, as amended (29 U.S.C. §794), which prohibits discrimination on the basis of handicaps; (d) the Age Discrimination Act of 1975, as amended (42 U.S.C. §§6101-6107), which prohibits discrimination on the basis of age; (e) the Drug Abuse Office and Treatment Act of 1972 (P.L. 92-255), as amended, relating to nondiscrimination on the basis of drug abuse; (f) the Comprehensive Alcohol Abuse and Alcoholism Prevention, Treatment and Rehabilitation Act of 1970 (P.L. 91-616), as amended, relating to nondiscrimination on the basis of alcohol abuse or alcoholism; (g) §§523 and 527 of the Public Health Service Act of 1912 (42 U.S.C. §§290 dd-3 and 290 ee 3), as amended, relating to confidentiality of alcohol and drug abuse patient records; (h) Title VIII of the Civil Rights Act of 1968 (42 U.S.C. §3601 et seq.), as amended, relating to nondiscrimination in the sale, rental or financing of housing; (i) any other nondiscrimination provisions in the specific statute(s) under which application for Federal assistance is being made; and, (j) the requirements of any other nondiscrimination statute(s) which may apply to the application.
7. Will comply, or has already complied, with the requirements of Titles II and III of the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970 (P.L. 91-646) which provide for fair and equitable treatment of persons displaced or whose property is acquired as a result of Federal or federally-assisted programs. These requirements apply to all interests in real property acquired for project purposes regardless of Federal participation in purchases.
8. Will comply, as applicable, with provisions of the Hatch Act (5 U.S.C. §§1501-1508 and 7324-7328) which limit the political activities of employees whose principal employment activities are funded in whole or in part with Federal funds.

9. Will comply, as applicable, with the provisions of the Davis-Bacon Act (40 U.S.C. §§276a to 276a-7), the Copeland Act (40 U.S.C. §276c and 18 U.S.C. §874), and the Contract Work Hours and Safety Standards Act (40 U.S.C. §§327-333), regarding labor standards for federally-assisted construction subagreements.
10. Will comply, if applicable, with flood insurance purchase requirements of Section 102(a) of the Flood Disaster Protection Act of 1973 (P.L. 93-234) which requires recipients in a special flood hazard area to participate in the program and to purchase flood insurance if the total cost of insurable construction and acquisition is \$10,000 or more.
11. Will comply with environmental standards which may be prescribed pursuant to the following: (a) institution of environmental quality control measures under the National Environmental Policy Act of 1969 (P.L. 91-190) and Executive Order (EO) 11514; (b) notification of violating facilities pursuant to EO 11738; (c) protection of wetlands pursuant to EO 11990; (d) evaluation of flood hazards in floodplains in accordance with EO 11988; (e) assurance of project consistency with the approved State management program developed under the Coastal Zone Management Act of 1972 (16 U.S.C. §§1451 et seq.); (f) conformity of Federal actions to State (Clean Air) Implementation Plans under Section 176(c) of the Clean Air Act of 1955, as amended (42 U.S.C. §§7401 et seq.); (g) protection of underground sources of drinking water under the Safe Drinking Water Act of 1974, as amended (P.L. 93-523); and, (h) protection of endangered species under the Endangered Species Act of 1973, as amended (P.L. 93-205).
12. Will comply with the Wild and Scenic Rivers Act of 1968 (16 U.S.C. §§1271 et seq.) related to protecting components or potential components of the national wild and scenic rivers system.
13. Will assist the awarding agency in assuring compliance with Section 106 of the National Historic Preservation Act of 1966, as amended (16 U.S.C. §470), EO 11593 (Identification and protection of historic properties), and the Archaeological and Historic Preservation Act of 1974 (16 U.S.C. §§469a-1 et seq.).
14. Will comply with P.L. 93-348 regarding the protection of human subjects involved in research, development, and related activities supported by this award of assistance.
15. Will comply with the Laboratory Animal Welfare Act of 1966 (P.L. 89-544, as amended, 7 U.S.C. §§2131 et seq.) pertaining to the care, handling, and treatment of warm blooded animals held for research, teaching, or other activities supported by this award of assistance.
16. Will comply with the Lead-Based Paint Poisoning Prevention Act (42 U.S.C. §§4801 et seq.) which prohibits the use of lead-based paint in construction or rehabilitation of residence structures.
17. Will cause to be performed the required financial and compliance audits in accordance with the Single Audit Act Amendments of 1996 and OMB Circular No. A-133, "Audits of States, Local Governments, and Non-Profit Organizations."
18. Will comply with all applicable requirements of all other Federal laws, executive orders, regulations, and policies governing this program.

SIGNATURE OF AUTHORIZED CERTIFYING OFFICIAL <i>John H. Haley</i>		TITLE <i>President</i>
APPLICANT ORGANIZATION <i>Combustion Technologies, L.L.C.</i>		DATE SUBMITTED May 15, 2003

Standard Form 424B (Rev. 7-97) Back

ADEQ0018096

**AVENTIS (agreement regarding Ethepon
Supply & Assumption Agreement) 11/15/00**



DEPARTMENT OF THE TREASURY
UNITED STATES CUSTOMS SERVICE
**MANUFACTURING DRAWBACK
ENTRY AND/OR CERTIFICATE**
19 CFR 191

Section I	A. <input type="checkbox"/> DRAWBACK ENTRY FOR EXPORTED ARTICLES (ENTRY)	1. NUMBER
	B. <input type="checkbox"/> CERTIFICATE OF MANUFACTURE AND DELIVERY (CM)	1. NUMBER
	C. <input checked="" type="checkbox"/> CERTIFICATE OF DELIVERY OF IMPORTED MDSE. (CD)	1. NUMBER
Type of Document		2. DATE DOCUMENT FILED (MMDDYY)

Statement Required by 5 CFR 1320.21: The estimated average burden associated with this collection of information is 2.08 hours per respondent or recordkeeper depending on individual circumstances. Comments concerning the accuracy of this burden estimate and suggestions for reducing this burden should be directed to U.S. Customs Service, Paperwork Management Branch, Washington, DC 20228, and to the Office of Management and Budget, Paperwork Reduction Project (1515-0148), Washington, DC 20503.

II. ENTRY RECORD (Claim)	3. ENTRY TYPE CODE	4. PORT CODE	5. CLAIMANT (Importer) ID No.	6. REFERENCE No.	7. ULTIMATE CLAIMANT AND ID NO.
	8. <input type="checkbox"/> APPLYING FOR ACCELERATED PAYMENT (Complete items 10-14.)		9. <input type="checkbox"/> AUTHORIZED FOR EXPORTER'S SUMMARY PROCEDURE (Complete items 10 and 11.)		
	10. BOND NO.	11. BOND TYPE CODE	12. DUTY REFUND \$	13. I.R. TAX REFUND \$	14. CLAIMED TOTAL REFUND \$
	III. AUTHORIZATION	FILED IN COMPLIANCE WITH 19 CFR 191	15. PURSUANT TO 19 U.S.C. 1313 (Indicated Below) OR 19 U.S.C. 1309(b) (Indicated Below)			16. T.D. No./APPROVAL

IV. IMPORTED DUTY-PAID MERCHANDISE OR DRAWBACK PRODUCTS

17. DESCRIPTION (Quantity, Kind, and Quality)

2 Tanks @ 38,680 net kgs of 3,4-Dichloroaniline Cont.#: SNIU121338-7; SNIU121340-6

18. IMPORT ENTRY NUMBER(S)	19. DATE:		20. PORT WHERE FILED	21. QUANTITY DESIGNATED	22. IMPORTED BY	23. IF 1313(b), DATE:		24. CM/CD NUMBER
	19a. OF IMPORT	19b. OF LIQUIDATION				23a. RECD AT FACTORY	23b. USED IN MFR.	
110-63082570	102097		2002	19,640 net kgs / 19,040 net kgs 19,040 net kgs	Bayer Corporation			

H.S.#: 2921.42.2300
Duty: 18904.10
Bayer No. 3041736; 3041732

25. VALUE AT FACTORY	26. QUANTITY OF WASTE, IF ANY	27. FACTORY VALUE OF WASTE
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28. QUANTITY/DESCRIPTION OF MERCHANDISE USED

29. QUANTITY/DESCRIPTION OF ARTICLE(S) PRODUCED	30. DATE PRODUCED	PLEASE CONTINUE ON BACK OF FORM.
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CUSTOMS USE ONLY	USE ITEMS 31-36 TO DESIGNATE A CM OR CD.	31. BEGINNING QUANTITY	32. CHARGED QUANTITY	33. BALANCE	34. DRAWBACK ENTRY NO., CM, or CD NO. TO WHICH CHARGED	35. GROSS PER UNIT DRAWBACK
	SELECTIVITY	ACCELERATED			LIQUIDATED	
		I.R. TAX AMOUNT: \$		I.R. TAX AMOUNT: \$		
	LIQUIDATOR CODE (INITIALS)	DUTY AMOUNT: \$		DUTY AMOUNT: \$		
		TOTAL AMOUNT: \$		TOTAL AMT: \$		

38. QUANTITY/DESCRIPTION OF ARTICLES EXPORTED

VI. TAX ON DOMESTIC TAX-PAID ALCOHOL

39. DESCRIPTION OF ALCOHOL USED

40. QUANTITY/DESCRIPTION OF ARTICLES PRODUCED

DOMESTIC TAX-PAID ALCOHOL USED IN THE MANUFACTURE OF THE ABOVE-DESCRIBED ARTICLES OR DELIVERED AS STATED IN SECTION VIII.

41. SERIAL NUMBERS OF PACKAGES	42. NO. AND DISTRICT OF DISTILLERY	43. DATE WITHDRAWN	44. SERIAL NUMBERS OF TAX-PAID STAMPS	45. WINE GALLONS	46. TAXABLE GALLONS	47. PROOF	48. WASTE

49. TAX PAID OR WITHDRAWN BY

50. CM OR CD NUMBER(S)

51. ATF CERTIFICATE NO. (If Known)

52. STATEMENT OF AMOUNT OF TAX CLAIMED (Check One)

\$1.00/Gal.

\$10.50/Gal.

\$ _____ (Other)

VII. CERTIFICATES OF MANUFACTURE AND DELIVERY

53. NAME OF MANUFACTURER OR PRODUCER

54. LOCATION (City & State)

55. DATE OF MFR.

56. ARTICLES DELIVERED TO AND DATE DELIVERED

The article(s) described in Sec. IV or VI was (were) manufactured or produced, and delivered, as stated herein in accordance with the contract on file with Customs and in compliance with all applicable laws and regulations.

57. DECLARANT'S NAME

58. TITLE

59. SIGNATURE AND DATE SIGNED

X

53. NAME OF MANUFACTURER OR PRODUCER

54. LOCATION (City & State)

55. DATE OF MFR.

56. ARTICLES DELIVERED TO AND DATE DELIVERED

The article(s) described in Sec. IV or VI was (were) manufactured or produced, and delivered, as stated herein in accordance with the contract on file with Customs and in compliance with all applicable laws and regulations.

57. DECLARANT'S NAME

58. TITLE

59. SIGNATURE AND DATE SIGNED

X

VIII. CERTIFICATES OF DELIVERY OF IMPORTED MERCHANDISE

60. QUANTITY DELIVERED

61. DESCRIPTION

62. RECEIVED BY

63. DATE RECD.

38,680 net kgs

3,4-Dichloroaniline, Pure

BAYER CORPORATION

102097

64. RECEIVED FROM

65. DELIVERED TO

66. DATE DEL.

CEDAR CHEMICAL CORP.

103097

67. DECLARANT'S NAME

68. TITLE

I certify that the within-described merchandise was received and delivered as stated herein.

JOANN BORGO

Attorney-in-fact

70. SIGNATURE AND DATE SIGNED

69. FIRM NAME

BAYER CORPORATION

X *Joann Borgo*

032598

60. QUANTITY DELIVERED

61. DESCRIPTION

62. RECEIVED BY

63. DATE RECD.

64. RECEIVED FROM

65. DELIVERED TO

66. DATE DEL.

67. DECLARANT'S NAME

68. TITLE

I certify that the within-described merchandise was received and delivered as stated herein.

69. FIRM NAME

70. SIGNATURE AND DATE SIGNED

X

IX. DECLARATION OF EXPORTATION, LADING OR USE

71. MERCHANDISE WAS SOLD TO A DEPARTMENT, BRANCH, OR AGENCY OF THE UNITED STATES GOVERNMENT. NO YES

72. MERCHANDISE IS TO BE USED OR CONSUMED ON THE EXPORTING VESSEL OR AIRCRAFT. NO YES (Complete items 73 & 74)

73. (If item 72 answered "YES") PURPOSE OF USE OR CONSUMPTION AS SPECIFIED IN SEC. 309, T.A. OF 1930, AS AMENDED, OR SEC. 4222 (26 U.S.C. 5052(c)) INTERNAL REVENUE CODE.

74. VESSEL OR AIRCRAFT (If item 72 is "YES")

75. DECLARANT'S NAME

I declare that according to my knowledge and belief, the particulars of exportation (or lading or use) stated in this document, the notices of lading, and receipts are correct and that the merchandise is not to be reloaded in the United States or any of its possessions.

76. TITLE

Member of Firm Officer Representing the Corporation Agent Attorney

78. SIGNATURE AND DATE SIGNED

77. FIRM NAME

X



DEPARTMENT OF THE TREASURY
UNITED STATES CUSTOMS SERVICE
**MANUFACTURING DRAWBACK
ENTRY AND/OR CERTIFICATE**
19 CFR 191

Approved through 10/31/91, OMB No. 1515-0148.

Statement Required by 5 CFR 1320.21: The estimated average burden associated with this collection of information is 2.08 hours per respondent or recordkeeper depending on individual circumstances. Comments concerning the accuracy of this burden estimate and suggestions for reducing this burden should be directed to U.S. Customs Service, Paperwork Management Branch, Washington, DC 20226, and to the Office of Management and Budget, Paperwork Reduction Project (1515-0148), Washington, DC 20503.

Section I	A. <input type="checkbox"/> DRAWBACK ENTRY FOR EXPORTED ARTICLES (ENTRY)	1. NUMBER
	B. <input type="checkbox"/> CERTIFICATE OF MANUFACTURE AND DELIVERY (CM)	1. NUMBER
	C. <input checked="" type="checkbox"/> CERTIFICATE OF DELIVERY OF IMPORTED MOSE (CD)	1. NUMBER
Type of Document	2. DATE DOCUMENT FILED (MMDDYY)	

II. ENTRY (Claim) RECORD	3. ENTRY TYPE CODE	4. PORT CODE	5. CLAIMANT (Importer) ID No.	6. REFERENCE No.	7. ULTIMATE CLAIMANT AND ID NO.
	8. <input type="checkbox"/> APPLYING FOR ACCELERATED PAYMENT (Complete Items 10-14.)			9. <input type="checkbox"/> AUTHORIZED FOR EXPORTER'S SUMMARY PROCEDURE (Complete Items 10 and 11.)	
	10. BOND NO.	11. BOND TYPE CODE	12. DUTY REFUND \$	13. I.R. TAX REFUND \$	14. CLAIMED TOTAL REFUND \$
III. AUTHORIZATION	FILED IN COMPLIANCE WITH 19 CFR 191	15. PURSUANT TO 19 U.S.C. 1313 (Indicated Below) OR 19 U.S.C. 1309(b) (Indicated Below)			16. T.D. No./APPROVAL

IV. IMPORTED DUTY-PAID MERCHANDISE OR DRAWBACK PRODUCTS

17. DESCRIPTION (Quantity, Kind, and Quality)
2 Tanks @ 38,680 net kgs of 3,4-Dichloroaniline Cont.#: SNIU121338-7; SNIU121340-6

18. IMPORT ENTRY NUMBER(S)	19. DATE:		20. PORT WHERE FILED	21. QUANTITY DESIGNATED	22. IMPORTED BY	23. IF 1313(b), DATE:		24. CM/CD NUMBER
	19a. OF IMPORT	19b. OF LIQUIDATION				23a. RECD AT FACTORY	23b. USED IN MFR.	
110-63082570	102097		2002	19,640 net kgs / 19,640 net kgs 19,040 net kgs	Bayer Corporation			
H.S.#: 2921.42.2300 Duty: 18904.10								
Bayer No. 3041736; 3041732								

25. VALUE AT FACTORY	26. QUANTITY OF WASTE, IF ANY	27. FACTORY VALUE OF WASTE
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28. QUANTITY/DESCRIPTION OF MERCHANDISE USED

28. QUANTITY/DESCRIPTION OF ARTICLE(S) PRODUCED	29. DATE PRODUCED	PLEASE CONTINUE ON BACK OF FORM.
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CUSTOMS USE ONLY	USE ITEMS 31-35 TO DESIGNATE A CM OR CD.	31. BEGINNING QUANTITY	32. CHARGED QUANTITY	33. BALANCE	34. DRAWBACK ENTRY NO., CM, or CD NO. TO WHICH CHARGED	35. GROSS PER UNIT DRAWBACK
	SELECTIVITY	ACCELERATED			LIQUIDATED	
		I.R. TAX AMOUNT: \$			I.R. TAX AMOUNT: \$	
	LIQUIDATOR CODE (INITIALS)	DUTY AMOUNT: \$			DUTY AMOUNT: \$	
		TOTAL AMOUNT: \$			TOTAL AMT: \$	

V. EXPORT: ARTICLES EXPORTED UNDER DRAWBACK REGULATIONS

36. EXPORTER/SHIPPER NAME	37. EXPORT DATE
---------------------------	-----------------

38. QUANTITY/DESCRIPTION OF ARTICLES EXPORTED

VI. TAX ON DOMESTIC TAX-PAID ALCOHOL

39. DESCRIPTION OF ALCOHOL USED	40. QUANTITY/DESCRIPTION OF ARTICLES PRODUCED
---------------------------------	---

DOMESTIC TAX-PAID ALCOHOL USED IN THE MANUFACTURE OF THE ABOVE-DESCRIBED ARTICLES OR DELIVERED AS STATED IN SECTION VIII.

41. SERIAL NUMBERS OF PACKAGES	42. NO. AND DISTRICT OF DISTILLERY	43. DATE WITHDRAWN	44. SERIAL NUMBERS OF TAX-PAID STAMPS	45. WINE GALLONS	46. TAXABLE GALLONS	47. PROOF	48. WASTE

49. TAX PAID OR WITHDRAWN BY	50. CM OR CD NUMBER(S)
------------------------------	------------------------

51. ATF CERTIFICATE NO. (If Known)	52. STATEMENT OF AMOUNT OF TAX CLAIMED (Check One)
	<input type="checkbox"/> \$1.00/Gal. <input type="checkbox"/> \$10.00/Gal. <input type="checkbox"/> \$ _____ (Other)

VII. CERTIFICATES OF MANUFACTURE AND DELIVERY

53. NAME OF MANUFACTURER OR PRODUCER	54. LOCATION (City & State)	55. DATE OF MFR.
56. ARTICLES DELIVERED TO AND DATE DELIVERED		The article(s) described in Sec. IV or VI was (were) manufactured or produced, and delivered, as stated herein in accordance with the contract on file with Customs and in compliance with all applicable laws and regulations. 59. SIGNATURE AND DATE SIGNED X
57. DECLARANT'S NAME	58. TITLE	

53. NAME OF MANUFACTURER OR PRODUCER	54. LOCATION (City & State)	55. DATE OF MFR.
56. ARTICLES DELIVERED TO AND DATE DELIVERED		The article(s) described in Sec. IV or VI was (were) manufactured or produced, and delivered, as stated herein in accordance with the contract on file with Customs and in compliance with all applicable laws and regulations. 59. SIGNATURE AND DATE SIGNED X
57. DECLARANT'S NAME	58. TITLE	

VIII. CERTIFICATES OF DELIVERY OF IMPORTED MERCHANDISE

60. QUANTITY DELIVERED	61. DESCRIPTION	62. RECEIVED BY	63. DATE RECD
38,680 net kgs	3,4-Dichloroaniline, Pure	BAYER CORPORATION	102097
64. RECEIVED FROM		65. DELIVERED TO	66. DATE DEL
		CEDAR CHEMICAL CORP.	103097
67. DECLARANT'S NAME		I certify that the within-described merchandise was received and delivered as stated herein.	
JOANN BORGO		68. TITLE	
68. FIRM NAME		70. SIGNATURE AND DATE SIGNED	
BAYER CORPORATION		X <i>Joann Borgo</i> 032598	

60. QUANTITY DELIVERED	61. DESCRIPTION	62. RECEIVED BY	63. DATE RECD
64. RECEIVED FROM		65. DELIVERED TO	66. DATE DEL
67. DECLARANT'S NAME		I certify that the within-described merchandise was received and delivered as stated herein.	
		70. SIGNATURE AND DATE SIGNED	
68. FIRM NAME		X	

IX. DECLARATION OF EXPORTATION, LADING OR USE

71. MERCHANDISE WAS SOLD TO A DEPARTMENT, BRANCH, OR AGENCY OF THE UNITED STATES GOVERNMENT. <input type="checkbox"/> NO <input type="checkbox"/> YES	72. MERCHANDISE IS TO BE USED OR CONSUMED ON THE EXPORTING VESSEL OR AIRCRAFT. <input type="checkbox"/> NO <input type="checkbox"/> YES (Complete Items 73 & 74)
---	--

73. (If Item 72 answered "YES") PURPOSE OF USE OR CONSUMPTION AS SPECIFIED IN SEC. 309, T.A. OF 1930, AS AMENDED, OR SEC. 4222 (28 U.S.C. 5092(c)) INTERNAL REVENUE CODE.	74. VESSEL OR AIRCRAFT (If Item 72 is "YES")
---	--

75. DECLARANT'S NAME	I declare that according to my knowledge and belief, the particulars of exportation (or lading or use) stated in this document, the notices of lading, and receipts are correct and that the merchandise is not to be reloaded in the United States or any of its possessions. 78. SIGNATURE AND DATE SIGNED X
76. TITLE	
77. FIRM NAME	
79. MEMBER OF FIRM <input type="checkbox"/> OFFICER REPRESENTING THE CORPORATION <input type="checkbox"/> AGENT <input type="checkbox"/> ATTORNEY <input type="checkbox"/>	

PAPERWORK REDUCTION ACT NOTICE: This information is requested in order to carry out U.S. Department of the Treasury laws and regulations, to determine the eligibility for refund of taxes on domestic alcohol (if applicable), and to determine the proper amount of drawback. Your response is required to obtain or retain a benefit.



DEPARTMENT OF THE TREASURY
UNITED STATES CUSTOMS SERVICE
MANUFACTURING DRAWBACK ENTRY AND/OR CERTIFICATE
19 CFR 191

Statement Required by 5 CFR 1320.21: The estimated average burden associated with this collection of information is 2.08 hours per respondent or recordkeeper depending on individual circumstances. Comments concerning the accuracy of this burden estimate and suggestions for reducing this burden should be directed to U.S. Customs Service, Paperwork Management Branch, Washington, DC 20226, and to the Office of Management and Budget, Paperwork Reduction Project (1515-0142), Washington, DC 20503.

Section I Type of Document	A. <input type="checkbox"/> DRAWBACK ENTRY FOR EXPORTED ARTICLES (ENTRY)	1. NUMBER
	B. <input type="checkbox"/> CERTIFICATE OF MANUFACTURE AND DELIVERY (CM)	1. NUMBER
	C. <input checked="" type="checkbox"/> CERTIFICATE OF DELIVERY OF IMPORTED MDSE. (CD)	1. NUMBER
		2. DATE DOCUMENT FILED (MMDDYY)

II. ENTRY (Customs) RECORD	3. ENTRY TYPE CODE	4. PORT CODE	5. CLAIMANT (Importer) ID No.	6. REFERENCE No.	7. ULTIMATE CLAIMANT AND ID NO.	
	8. <input type="checkbox"/> APPLYING FOR ACCELERATED PAYMENT (Complete items 10-14.)			9. <input type="checkbox"/> AUTHORIZED FOR EXPORTER'S SUMMARY PROCEDURE (Complete items 10 and 11.)		
	10. BOND NO.	11. BOND TYPE CODE	12. DUTY REFUND \$	13. I.R. TAX REFUND \$	14. CLAIMED TOTAL REFUND \$	
III. AUTHORIZATION	FILED IN COMPLIANCE WITH 19 CFR 191	15. PURSUANT TO 19 U.S.C. 1313 (Indicated Below) OR 19 U.S.C. 1303(b) (Indicated Below)				16. T.D. No./APPROVAL

IV. IMPORTED DUTY-PAID MERCHANDISE OR DRAWBACK PRODUCTS

17. DESCRIPTION (Quantity, Kind, and Quality)
2 Tanks @ 38,680 net kgs of 3,4-Dichloroaniline Cont.#: SNIU121338-7; SNIU121340-6

19. IMPORT ENTRY NUMBER(S)	18. DATE:		20. PORT WHERE FIRED	21. QUANTITY DESIGNATED	22. IMPORTED BY	23. IF 1313(b), DATE:		24. CM/CD NUMBER
	18a. OF IMPORT	18b. OF LIQUIDATION				23a. RECD AT FACTORY	23b. USED IN MFR.	
110-63082570	102097		2002	19,640 net kgs / 10,040 net kgs	Bayer Corporation			

Sent originals back to Bayer
4/7 -

25. VALUE AT FACTORY	26. QUANTITY OF WASTE, IF ANY
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27. QUANTITY/DESCRIPTION OF MERCHANDISE USED

28. QUANTITY/DESCRIPTION OF ARTICLE(S) PRODUCED

CUSTOMS USE ONLY	USE ITEMS 31-35 TO DESIGNATE A CM OR CD.	31. BEGINNING QUANTITY	32. CHARGED QUANTITY	33. BALANCE	34. DRAWBACK ENTRY NO., CM, or CD NO. TO WHICH CHARGED	35. GROSS PER UNIT DRAWBACK
	SELECTIVITY	ACCELERATED			LIQUIDATED	
		I.R. TAX AMOUNT: \$			I.R. TAX AMOUNT: \$	
	LIQUIDATOR CODE (INITIALS)	DUTY AMOUNT: \$			DUTY AMOUNT: \$	
		TOTAL AMOUNT: \$			TOTAL AMT: \$	

36. EXPORTER/SHIPPER NAME	37. EXPORT DATE
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38. QUANTITY/DESCRIPTION OF ARTICLES EXPORTED

VI. TAX ON DOMESTIC TAX-PAID ALCOHOL

39. DESCRIPTION OF ALCOHOL USED	40. QUANTITY/DESCRIPTION OF ARTICLES PRODUCED
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DOMESTIC TAX-PAID ALCOHOL USED IN THE MANUFACTURE OF THE ABOVE-DESCRIBED ARTICLES OR DELIVERED AS STATED IN SECTION VIII.

41. SERIAL NUMBERS OF PACKAGES	42. NO. AND DISTRICT OF DISTILLERY	43. DATE WITHDRAWN	44. SERIAL NUMBERS OF TAX-PAID STAMPS	45. WINE GALLONS	46. TAXABLE GALLONS	47. PROOF	48. WASTE

49. TAX PAID OR WITHDRAWN BY	50. CM OR CD NUMBER(S)
51. ATF CERTIFICATE NO. (If Known)	52. STATEMENT OF AMOUNT OF TAX CLAIMED (Check One) <input type="checkbox"/> \$1.00/Gal. <input type="checkbox"/> \$10.50/Gal. <input type="checkbox"/> \$ _____ (Other)

VII. CERTIFICATES OF MANUFACTURE AND DELIVERY

53. NAME OF MANUFACTURER OR PRODUCER	54. LOCATION (City & State)	55. DATE OF MFR.
56. ARTICLES DELIVERED TO AND DATE DELIVERED		The article(s) described in Sec. IV or VI was (were) manufactured or produced, and delivered, as stated herein in accordance with the contract on file with Customs and in compliance with all applicable laws and regulations.
57. DECLARANT'S NAME	58. TITLE	
59. SIGNATURE AND DATE SIGNED		X

63. NAME OF MANUFACTURER OR PRODUCER	64. LOCATION (City & State)	65. DATE OF MFR.
66. ARTICLES DELIVERED TO AND DATE DELIVERED		The article(s) described in Sec. IV or VI was (were) manufactured or produced, and delivered, as stated herein in accordance with the contract on file with Customs and in compliance with all applicable laws and regulations.
67. DECLARANT'S NAME	68. TITLE	
69. SIGNATURE AND DATE SIGNED		X

VIII. CERTIFICATES OF DELIVERY OF IMPORTED MERCHANDISE

60. QUANTITY DELIVERED	61. DESCRIPTION	62. RECEIVED BY	63. DATE RECD
38,680 net kgs	3,4-Dichloroaniline, Pure	BAYER CORPORATION	102097
64. RECEIVED FROM	65. DELIVERED TO	66. DATE DEL	67. DATE DEL
	CEDAR CHEMICAL CORP.	103097	
67. DECLARANT'S NAME	68. TITLE	I certify that the within-described merchandise was received and delivered as stated herein.	
JOANN BORGO	Attorney-in-fact	70. SIGNATURE AND DATE SIGNED	
69. FIRM NAME		<i>Joann Borgo</i>	
BAYER CORPORATION		032598	

60. QUANTITY DELIVERED	61. DESCRIPTION	62. RECEIVED BY	63. DATE RECD.
		COPY	
64. RECEIVED FROM	65. DELIVERED TO	66. DATE DEL.	67. DATE DEL.
67. DECLARANT'S NAME	68. TITLE	I certify that the within-described merchandise was received and delivered as stated herein.	
		70. SIGNATURE AND DATE SIGNED	
69. FIRM NAME		X	

IX. DECLARATION OF EXPORTATION, LADING OR USE

71. MERCHANDISE WAS SOLD TO A DEPARTMENT, BRANCH OR AGENCY OF THE UNITED STATES GOVERNMENT. <input type="checkbox"/> NO <input type="checkbox"/> YES	72. MERCHANDISE IS TO BE USED OR CONSUMED ON THE EXPORTING VESSEL OR AIRCRAFT. <input type="checkbox"/> NO <input type="checkbox"/> YES (Complete Items 73 & 74)
73. (If Item 72 answered "YES") PURPOSE OF USE OR CONSUMPTION AS SPECIFIED IN SEC. 309, T.A. OF 1930, AS AMENDED, OR SEC. 4222 (28 U.S.C. 5002(a)) INTERNAL REVENUE CODE.	74. VESSEL OR AIRCRAFT (If Item 72 is "YES")

75. DECLARANT'S NAME	I declare that according to my knowledge and belief, the particulars of exportation (or lading or use) stated in this document, the notices of lading, and receipts are correct and that the merchandise is not to be reloaded in the United States or any of its possessions.
76. TITLE	78. SIGNATURE AND DATE SIGNED
<input type="checkbox"/> Member of Firm <input type="checkbox"/> Officer Representing the Corporation <input type="checkbox"/> Agent <input type="checkbox"/> Attorney	X
77. FIRM NAME	

PAPERWORK REDUCTION ACT NOTICE: This information is requested in order to carry out U.S. Department of the Treasury laws and regulations, to determine the eligibility for refund of taxes on domestic alcohol (if applicable), and to determine the proper amount of drawback. Your response is required to obtain or retain a benefit.



DEPARTMENT OF THE TREASURY
UNITED STATES CUSTOMS SERVICE
MANUFACTURING DRAWBACK ENTRY CERTIFICATE
19 CFR 191

Section I Type of Document	A. <input type="checkbox"/> DRAWBACK ENTRY FOR EXPORTED ARTICLES (ENTRY)	1. NUMBER
	B. <input type="checkbox"/> CERTIFICATE OF MANUFACTURE AND DELIVERY (CM)	1. NUMBER
	C. <input checked="" type="checkbox"/> CERTIFICATE OF DELIVERY OF IMPORTED MERCH. (CD)	1. NUMBER
		2. DATE DOCUMENT FILED (MMDDYY)

Statements Required by 5 CFR 1220.21: The estimated average burden associated with this collection of information is 2.08 hours per respondent or recordkeeper depending on individual circumstances. Comments concerning the accuracy of this burden estimate and suggestions for reducing this burden should be directed to U.S. Customs Service, Paperwork Management Branch, Washington, DC 20226, and to the Office of Management and Budget, Paperwork Reduction Project (1515-0149), Washington, DC 20503.

II. ENTRY (Customs) RECORD	1. ENTRY TYPE CODE	4. PORT CODE	5. CLAIMANT (Importer) ID No.	6. REFERENCE No.	7. ULTIMATE CLAIMANT AND ID NO.
	8. <input type="checkbox"/> APPLYING FOR ACCELERATED PAYMENT (Complete Items 10-14.)			9. <input type="checkbox"/> AUTHORIZED FOR EXPORTER'S SUMMARY PROCEDURE (Complete Items 10 and 11.)	
	10. BOND NO.	11. BOND TYPE CODE	12. DUTY REFUND \$	13. I.R. TAX REFUND \$	14. CLAIMED TOTAL REFUND \$
III. AUTHORIZATION	FILED IN COMPLIANCE WITH 19 CFR 191	15. PURSUANT TO 19 U.S.C. 1313 (Indicated Below) OR 19 U.S.C. 1309(b) (Indicated Below)			
		<input type="checkbox"/> a	<input type="checkbox"/> b	<input type="checkbox"/> c	<input type="checkbox"/> d
		<input type="checkbox"/> e	<input type="checkbox"/> f	<input type="checkbox"/> g	<input type="checkbox"/> h
					16. T.D. No./APPROVAL

IV. IMPORTED DUTY-PAID MERCHANDISE OR DRAWBACK PRODUCTS

17. DESCRIPTION (Quantity, Kind, and Quality)
2 Tanks @ 38,680 net kgs of 3,4-Dichloroaniline Cont.#: SNIU121338-7; SNIU121340-6

18. IMPORT ENTRY NUMBER(S)	19. DATE:		20. PORT WHERE FILED	21. QUANTITY DESIGNATED	22. IMPORTED BY	23. IF 1313(b), DATE:		24. CM/CD NUMBER
	19a. OF IMPORT	19b. OF LIQUIDATION				23a. RECD AT FACTORY	23b. USED IN MFR.	
110-63082570	102097		2002	19,640 net kgs / 10,040 net kgs	Bayer Corporation			
H.S.#: 2921.42.2300 Duty: 18904.10 Bayer No. 3041736; 3041732								

25. VALUE AT FACTORY	26. QUANTITY OF WASTE, IF ANY	27. FACTORY VALUE OF WASTE
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28. QUANTITY/DESCRIPTION OF MERCHANDISE USED

29. QUANTITY/DESCRIPTION OF ARTICLE(S) PRODUCED	30. DATE PRODUCED	PLEASE CONTINUE ON BACK OF FORM.
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CUSTOMS USE ONLY	31. BEGINNING QUANTITY	32. CHARGED QUANTITY	33. BALANCE	34. DRAWBACK ENTRY NO., CM, or CD NO. TO WHICH CHARGED	35. GROSS PER UNIT DRAWBACK
SELECTIVITY		ACCELERATED		LIQUIDATED	
		I.R. TAX AMOUNT: \$		I.R. TAX AMOUNT: \$	
LIQUIDATOR CODE (INITIALS)		DUTY AMOUNT: \$		DUTY AMOUNT: \$	
		TOTAL AMOUNT: \$		TOTAL AMT: \$	

38. EXPORTER/SHIPPER NAME	37. EXPORT DATE
---------------------------	-----------------

39. QUANTITY/DESCRIPTION OF ARTICLES EXPORTED

VI. TAX ON DOMESTIC TAX-PAID ALCOHOL 39. DESCRIPTION OF ALCOHOL USED	40. QUANTITY/DESCRIPTION OF ARTICLES PRODUCED
---	---

DOMESTIC TAX-PAID ALCOHOL USED IN THE MANUFACTURE OF THE ABOVE-DESCRIBED ARTICLES OR DELIVERED AS STATED IN SECTION VIII.

41. SERIAL NUMBERS OF PACKAGES	42. NO. AND DISTRICT OF DISTILLERY	43. DATE WITHDRAWN	44. SERIAL NUMBERS OF TAX-PAID STAMPS	45. WINE GALLONS	46. TAXABLE GALLONS	47. PROOF	48. WASTE

49. TAX PAID OR WITHDRAWN BY	50. CM OR CD NUMBER(S)
------------------------------	------------------------

51. ATF CERTIFICATE NO. (If Known)	52. STATEMENT OF AMOUNT OF TAX CLAIMED (Check One) <input type="checkbox"/> \$1.00/Gal. <input type="checkbox"/> \$10.00/Gal. <input type="checkbox"/> \$ _____ (Other)
------------------------------------	--

VII. CERTIFICATES OF MANUFACTURE AND DELIVERY

53. NAME OF MANUFACTURER OR PRODUCER	54. LOCATION (City & State)	55. DATE OF MFR.
--------------------------------------	-----------------------------	------------------

56. ARTICLES DELIVERED TO AND DATE DELIVERED	The article(s) described in Sec. IV or VI was (were) manufactured or produced, and delivered, as stated herein in accordance with the contract on file with Customs and in compliance with all applicable laws and regulations. 59. SIGNATURE AND DATE SIGNED X
57. DECLARANT'S NAME	58. TITLE

63. NAME OF MANUFACTURER OR PRODUCER	64. LOCATION (City & State)	65. DATE OF MFR.
--------------------------------------	-----------------------------	------------------

66. ARTICLES DELIVERED TO AND DATE DELIVERED	The article(s) described in Sec. IV or VI was (were) manufactured or produced, and delivered, as stated herein in accordance with the contract on file with Customs and in compliance with all applicable laws and regulations. 69. SIGNATURE AND DATE SIGNED X
67. DECLARANT'S NAME	68. TITLE

VIII. CERTIFICATES OF DELIVERY OF IMPORTED MERCHANDISE

60. QUANTITY DELIVERED 38,680 net kgs	61. DESCRIPTION 3,4-Dichloroaniline, Pure	62. RECEIVED BY BAYER CORPORATION	63. DATE REC'D 102097
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64. RECEIVED FROM	68. DELIVERED TO CEDAR CHEMICAL CORP.	66. DATE DEL. 103097
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67. DECLARANT'S NAME JOANN BORGO	68. TITLE Attorney-in-fact	I certify that the within-described merchandise was received and delivered as stated herein. 70. SIGNATURE AND DATE SIGNED X <i>John Borgo</i> 032598
69. FIRM NAME BAYER CORPORATION		

60. QUANTITY DELIVERED	61. DESCRIPTION	62. RECEIVED BY	63. DATE REC'D
------------------------	-----------------	-----------------	----------------

64. RECEIVED FROM	68. DELIVERED TO	66. DATE DEL.
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67. DECLARANT'S NAME	68. TITLE	I certify that the within-described merchandise was received and delivered as stated herein. 70. SIGNATURE AND DATE SIGNED X
69. FIRM NAME		

IX. DECLARATION OF EXPORTATION, LADING OR USE

71. MERCHANDISE WAS SOLD TO A DEPARTMENT, BRANCH OR AGENCY OF THE UNITED STATES GOVERNMENT. <input type="checkbox"/> NO <input type="checkbox"/> YES	72. MERCHANDISE IS TO BE USED OR CONSUMED ON THE EXPORTING VESSEL OR AIRCRAFT. <input type="checkbox"/> NO <input type="checkbox"/> YES <small>(Complete Items 73 & 74)</small>
--	--

73. (If Item 72 answered "YES") PURPOSE OF USE OR CONSUMPTION AS SPECIFIED IN SEC. 309, T.A. OF 1930, AS AMENDED, OR SEC. 4222 (26 U.S.C. 5002(c)) INTERNAL REVENUE CODE.	74. VESSEL OR AIRCRAFT (If Item 72 is "YES")
---	--

75. DECLARANT'S NAME	I declare that according to my knowledge and belief, the particulars of exportation (or lading or use) stated in this document, the notices of lading, and receipts are correct and that the merchandise is not to be reloaded in the United States or any of its possessions. 78. SIGNATURE AND DATE SIGNED X
76. TITLE <input type="checkbox"/> Member of Firm <input type="checkbox"/> Officer Representing the Corporation <input type="checkbox"/> Agent <input type="checkbox"/> Attorney	
77. FIRM NAME	

PAPERWORK REDUCTION ACT NOTICE: This information is requested in order to carry out U.S. Department of the Treasury laws and regulations, to determine the eligibility for refund of taxes on domestic alcohol (if applicable), and to determine the proper amount of drawback. Your response is required to obtain or retain a benefit.

IP2

PRINT DATE 3/23/01 TIME 11:42:44

RICECO, LLC
MEMPHIS, TN

ORDER ORDER
DATE NUMBER
3/23/01 3449

SOLD TO:
AVENTIS CRPSCE ITALIA SPA
21040 ORIGGIO (VA)
PIAZZALE STEFANO TURR, 5
11-20149 MILANO
VIALE EUROPA

REQ DELV DATE: 4/24/01
REQ SHIP DATE: 3/26/01

FX 0039-02-31-913-366 80-082-3040

SHIP TO:
AVENTIS CROPSCIENCE
ITALIA SPA ITALIA
C/O AGRIFORMULA
LOCALITA CASELLE DE BAZZA
NO 67100 L'AQUILA

DONATELLA NERI 390 231-191-3366

CUST. NO.	CUST ORDER NO.	SALESMAN	FRT.PPD/COL
6000-01	104906/220301	R. VEGA	PREPAID
SHIPPED FROM	FOB POINT	SHIP VIA	TERMS
WEST HELENA PLANT	DESTINATION	COMMON CARRIER	NET 120 DAYS
QTY	CONTAINER	ITEM	
ORDERED	SIZE	NUMBER	DESCRIPTION

100 BAG 03060 FLAKE TECH 25 KG
I CIF ITALIAN PORT

*AVENTIS TECH
104906*

*OK
3/23
sup 3/20*

GILSCOT GUIDROZ INTERNATIONAL
201 EVANS RD., STE 333 NEW ORLEANS, LA 70123
PHONE: 504-731-1997 FAX: 504-731-1998

TO: RAFAEL VEGA-RICECO

CC: LISA WALKER-CED AR

DATE: 3/23/01

BOOKING CONFIRMATION

FROM: ADA VINCENT

SHIPPER: RICECO

ORDER REF NO: 3449

NO. PCS & WEIGHT: 3 PLTS N/H HERBICIDES

BKG NO: MEMMLN0114001

VESSEL: ZIM EUROPA V14

C/O: 3/28

ETS: 4/4

ETA: 4/22

SS CO.: CAROTRANS

PLACE OF RECEIPT: MEMPHIS

LOAD PORT: JERSEY CITY, N.J.

DESTINATION PORT: GENOA

SUPPLIER/PICK UP LOCATION: CED AR TO LOAD

MONDAY MORNING 3/26/01 TRUCKER WILL BE

AMERICAN FREIGHTWAYS

DELIVERY INFO: GILSCOT C/O CAROTRANS

C/O FORWARD AIR INTL

8338 DEMOCRAT ROAD

MEMPHIS, TN 38118

09/05/01 08:34

Raw Materials Acceptance Specs

COPY 4

Chemical	Supplier Name	City	State	Spec #
2,4 DCA, CYC	VARIOUS			910200
Test Method Type	Low	High	Description	
2,4 DCA% COA	99.0000	100.0000	.	

Chemical	Supplier Name	City	State	Spec #
ACETIC ACID				910194
Chemical	Supplier Name	City	State	Spec #
ACETIC ACID	A AND W AMERICAS	CHARLESTON	SC	910058
Test Method Type	Low	High	Description	
ACETIC % COA	96.5000	100.0000	ACETIC % 96.5 min	

Chemical	Supplier Name	City	State	Spec #
ACETIC ANHYD	EASTMAN CHEMICAL CO.	KINGSPORT	TN	910090
Test Method Type	Low	High	Description	
ANHYD % COA	99.5000	100.0000	99.5% min	

Chemical	Supplier Name	City	State	Spec #
ACETIC ANHYD	HOECHST-CELANESE	PAMPA	TX	910034
Test Method Type	Low	High	Description	
ANHYD % COA	99.5000	100.0000	ANHYDRIDE %99.5 min	

Chemical	Supplier Name	City	State	Spec #
ACETIC TRUCK	CONE SOLVENTS	MEMPHIS	TN	910108
Test Method Type	Low	High	Description	
%PURITY coa	99.8500	100.0000	purity	
ACETIC % COA	95.0000	99.9000	95-99.9%active	

Chemical	Supplier Name	City	State	Spec #
ACETIC\FMC	CONE SOLVENTS	MEMPHIS	TN	910136
Test Method Type	Low	High	Description	
% ACTIVE COA	95.0000	99.9000	% acetic acid active	
%PURITY coa	99.8500	100.0000	purity for glacial acetic acid	

Chemical	Supplier Name	City	State	Spec #
ACETONE	JLM INDUSTRIES	MT VERNON, INDIANA	IN	910057
Test Method Type	Low	High	Description	
WATER % COA	0.0100	0.3000	0.3% water max	

Chemical	Supplier Name	City	State	Spec #
ACETONE	IDEAL	MEMPHIS	TN	910056
Test Method Type	Low	High	Description	
WATER % COA	N 0.0100	0.3000	WATER IN ACETONE 0.3% max	

APPROVED
 SEP 12 2001
 BY: *[Signature]*

Chemical	Supplier Name	City	State	Spec #	
AGENT 1568-6	STEPAN	WINDER	GA	910064	
Test	Method	Type	Low	High	Description
PERFORMN	PROP-7		1.0000	3.0000	1 = fail, 2 = pass
WATER %	GAM-2		0.0100	2.0000	.

Chemical	Supplier Name	City	State	Spec #	
AGNT X205615	STEPAN	WINDER	GA	910103	
Test	Method	Type	Low	High	Description
PERMFORN	PROP-7		1.0000	3.0000	PROPANIL EMULSION PERFORMANCE 1 = fail, 2 = pass
WATER %	GAM-2		0.0100	2.0000	.

Chemical	Supplier Name	City	State	Spec #	
ALUM SULFATE	CONE SOLVENTS	MEMPHIS	TN	910133	
Test	Method	Type	Low	High	Description
WT % ALM	COA		48.0000	52.0000	.

Chemical	Supplier Name	City	State	Spec #	
ANHYD. HCL	VARIOUS			910094	
Test	Method	Type	Low	High	Description
%HCL-ANH	from COA		99.0000	100.0000	% anhydrous HCL 99% min

Chemical	Supplier Name	City	State	Spec #	
AU-522	ADJU. UNLLIM .3LB EMULS.	TULSA	OK	910043	
Test	Method	Type	Low	High	Description
PERFORMN	PROP-7		1.0000	3.0000	1 = fail, 2 = pass.
WATER %	GAM-2		0.0100	2.0000	.

Chemical	Supplier Name	City	State	Spec #	
B AROMATICS	BASIS PETROLEUM	HOUSTON	TX	910021	
Test	Method	Type	Low	High	Description
B AROMAT	COA		1.0000	3.0000	1 = not B grade, 2 = is B grade

Chemical	Supplier Name	City	State	Spec #	
B AROMATICS	PHIBRO	HOUSTON	TX	910055	
Test	Method	Type	Low	High	Description
B AROMAT	COA		1.0000	3.0000	1 = not B grade, 2 = is B grade

Chemical	Supplier Name	City	State	Spec #	
B-ODCB				910004	
Test	Method	Type	Low	High	Description
%ODCB	na		98.0000	100.0000	Bayer ODCB 98.5%min odcb, 1% max pdcb
%PDCB	na		0.0010	2.0000	para

Chemical	Supplier Name	City	State	Spec #	
BHT	VARIOUS			910126	
Test	Method	Type	Low	High	Description
ASH	COA		0.0001	0.0020	ASH = 0.002 MAX, 2,6DI-TERT-BUTYL-PARA-CRESOL = BHT
COLOR	COA		0.0010	5.0000	APHA COLOR OF 10% SOLUTION = 5MAX
FREEZ PT	COA		0.0010	69.3000	69.2 C MINIMUM FREEZE POINT
MOISTURE	COA		0.0001	0.0500	0.05% MAX MOISTURE
PURITY	COA		99.0000	100.0000	2,6-DITERT-BUTYL PARA-CRESOL = BHT

Chemical	Supplier Name	City	State	Spec #
BROMINE	VARIOUS			910183

Test	Method	Type	Low	High	Description
BROMIN %	COA		99.9000	100.0000	.

Chemical	Supplier Name	City	State	Spec #
BUTYL ALCOHL	SHELL CHEMICAL CO	DEER PARK	TX	910060

Test	Method	Type	Low	High	Description
BUTYL %	COA		99.0000	100.0000	99%min.

Chemical	Supplier Name	City	State	Spec #
C-5643 EMULS	WITCO	MEMPHIS	TX	910205

Test	Method	Type	Low	High	Description
EMULS	COA		1.0000	2.0000	.
WATER %	COA		0.0100	1.0000	.

Chemical	Supplier Name	City	State	Spec #
CALC CHLORID	TETRA CHEMICALS	WEST MEMPHIS	AR	910062
Test	Method	Type	Low	High
NO SPEC.	no specs		1.0000	3.0000
Description: no specification required - 1=we reject, 2 = we accept.				

Chemical	Supplier Name	City	State	Spec #
CALCCHLR-FMC	VARIOUS			910154
Test	Method	Type	Low	High
CACL2 %	coa		34.0000	38.0000
Description: .				

Chemical	Supplier Name	City	State	Spec #
CATALYST-DCA	JOHNSON MATTHEY	WEST DEPTFORD	NJ	910167
Test	Method	Type	Low	High
ACTIVITY R&D			6.0000	12.0000
Description: .				

Chemical	Supplier Name	City	State	Spec #
CATLYST-CYMP	VARIOUS			910151
Test	Method	Type	Low	High
PALLADIM COA	G		5.0000	0.0000
Description: .				

Chemical	Supplier Name	City	State	Spec #
CAUSTIC\FMC	CHEMTECH.	MEMPHIS	TN	910134
Test	Method	Type	Low	High
% NAOH	COA		49.0000	51.0000
Description: .				

Chemical	Supplier Name	City	State	Spec #
CHLORINE\FMC	IDEAL	MEMPHIS	TN	910135
Test	Method	Type	Low	High
CHLORINE COA			99.5000	100.0000
Description: %chlorine				

Chemical	Supplier Name	City	State	Spec #
CPDM-CYCLAN	CREANOVA			910199
Test	Method	Type	Low	High
DIMM %	COA	L	1.0000	1.0000
DMF %	COA	L	0.7500	0.7500
PURITY %	COA	G	97.5000	0.0000
Description: .				

Chemical	Supplier Name	City	State	Spec #
CYCLOHEXANE				910187

Chemical	Supplier Name	City	State	Spec #
CYCLOHEXANE	CONE SOLVENTS	MEMPHIS	TN	910174
Test	Method	Type	Low	High
% H2O	COA		0.0100	0.1000
Description: .				

Chemical	Supplier Name		City		State	Spec #
DCA	BAYER PRODUCTS		PITTSBURGH		PA	910127
Test	Method	Type	Low	High	Description	
% DCA	COA		98.0000	100.0000	% DCA	
H2O PPM	COA		0.0001	500.0000	Water in DCA	

Chemical	Supplier Name		City		State	Spec #
DCA	TOLOCHIMIE		TOULOUSE			910146
Test	Method	Type	Low	High	Description	
DCA %	COA		98.0000	100.0000	.	
WATERPPM	COA		10.0000	1000.0000	.	

Chemical	Supplier Name	City	State	Spec #	
DCA RM-PROCH	PROCHROM INC.	SALVADOR-BAHTI		910104	
Test	Method	Type	Low	High	Description
COA	COA		98.0000	100.0000	98%min., 500 ppm water max
Chemical	Supplier Name	City	State	Spec #	
DCP-DOVER	SCHNECTADY CHEMICAL			910163	
Test	Method	Type	Low	High	Description
ASSAY %	COA		95.0000	100.0000	.
H2O PPM	COA		0.0100	200.0000	.
Chemical	Supplier Name	City	State	Spec #	
DCPD	BF GOODRICH	CALVERT CITY	KY	910125	
Test	Method	Type	Low	High	Description
C10, ACET	COA		0.0025	0.0055	C10%
DCPD %	COA	G	99.0000	100.0000	% DCPD
OXY'S	COA	L	0.0001	0.0025	0.0025% MAX
WATER	COA		0.0001	100.0000	100 PPM WATER MAX
Chemical	Supplier Name	City	State	Spec #	
DCPD	KMTEX	PORT ARTHUR	TX	910045	
Test	Method	Type	Low	High	Description
C10 ACET	COA		0.0025	0.0055	C10 %
DCPD %	COA	G	99.0000	100.0000	99%min
OXYS	COA	L	0.0001	0.0025	0.0025%MAX
WATER	COA		0.0001	100.0000	100 PPM MAX WATER
Chemical	Supplier Name	City	State	Spec #	
DCPD	VARIOUS			910165	
Test	Method	Type	Low	High	Description
C10	COA		0.0025	0.0055	C10 ACETYLENES
DCPD	COA		99.0000	100.0000	%DCPD 99.0%MIN
OXY	COA		0.0001	0.0025	OXY 0.0025% MAX
WATER	COA		0.0001	100.0000	WATER 100 PPM MAX
Chemical	Supplier Name	City	State	Spec #	
DCPI	TOLOCHIMIE	TOULOUSE		910031	
Test	Method	Type	Low	High	Description
DCPI %	COA		98.0000	100.0000	98%min
Chemical	Supplier Name	City	State	Spec #	
DCPI, PPG	PPG INDUSTRIES	NATRIUM	WV	910202	
Test	Method	Type	Low	High	Description

2,3 DCPI	COA	0.0100	0.9000	.
DCPI, %	COA	98.7000	100.0000	.

Chemical	Supplier Name	City	State	Spec #
DEAC	VARIOUS			910123

Test	Method	Type	Low	High	Description
ALUMINUM	COA		21.9000	22.4000	DIETHYLALUMINUM CHLORIDE = DEAC
APPEAR	COA		0.0001	100.0000	TYPICAL, TYPICAL = 100
CHLORIDE	COA		29.2000	29.7000	CHLORIDE
CL/AL	COA		1.0000	1.0300	MOLAR RATIO
ETHANE	COA		98.0000	100.0000	ETHANE MOLAR%
HYDROGEN	COA		0.0001	0.2000	HYDROGEN MOLEAR% 0.2 MAX
IBUTANE	COA		0.0001	0.2000	IBUTANE MOLAR % 0.2MAX
NBUTANE	COA		0.0001	2.0000	2 % MAX NBUTANE MOLAR %

Chemical	Supplier Name	City	State	Spec #
DICNIL-CYMP	VARIOUS			910153
Test Method Type	Low	High	Description	
DICNIL % COA	0.0100	100.0000	.	
Chemical	Supplier Name	City	State	Spec #
DIENE RUBBER	FIRESTONE	LAKE CHARLES	LA	910189
Test Method Type	Low	High	Description	
DIENE COA	1.1000	2.0000	BFG PREAPPROVES THIS MATERIAL.	
Chemical	Supplier Name	City	State	Spec #
DMA	AIR PRODUCTS	DECATUR	AL	910068
Test Method Type	Low	High	Description	
%DMA COA	99.0000	100.0000	DMA 99%min	
Chemical	Supplier Name	City	State	Spec #
DMA	AIR PRODUCTS.	LEHIGH VALLEY	PA	910069
Test Method Type	Low	High	Description	
% DMA COA	99.0000	100.0000	dma 99% min	
Chemical	Supplier Name	City	State	Spec #
DMA	ACCRON	SPRING	TX	910210
Test Method Type	Low	High	Description	
DMA% COA	99.0000	100.0000	.	
Chemical	Supplier Name	City	State	Spec #
DMA	SHELL CHEMICAL CO	DEER PARK	TX	910207
Chemical	Supplier Name	City	State	Spec #
DMF	AIR PRODUCTS	DECATUR	AL	910033
Test Method Type	Low	High	Description	
DMF % COA	99.9000	100.0000	99.9% min, 500ppm water max	
WATER % COA	0.0100	0.0500	.	
Chemical	Supplier Name	City	State	Spec #
DPO-PENTABRM	DOW CHEMICAL	FREEMPORT	TX	910179
Test Method Type	Low	High	Description	
DPO % COA	99.0000	100.0000	DPO %	
Chemical	Supplier Name	City	State	Spec #
EDC	OCCIDENTAL CHEMICAL	BAYPORT	TX	910087
Test Method Type	Low	High	Description	
EDC % COA	99.9400	100.0000	99.95% min	

Chemical	Supplier Name	City	State	Spec #	
EDC	VARIOUS			910114	
Test	Method	Type	Low	High	Description
%EDC	COA		99.9400	100.0000	EDC raw material for TA production

Chemical	Supplier Name	City	State	Spec #	
EMULS-MOLNTE	WITCO	MEMPHIS	TX	910177	
Test	Method	Type	Low	High	Description
PERFORM	DICK FRA		0.0100	2.0000	.

Chemical	Supplier Name	City	State	Spec #	
EPAC	VARIOUS			910120	
Test	Method	Type	Low	High	Description
BFG OK'D	none		1.0000	3.0000	1 = no / 2 = yes bfg approved

Chemical	Supplier Name	City	State	Spec #	
ETHANOX 330	VARIOUS			910102	
Test	Method	Type	Low	High	Description
APPEAR	COA		10.0000	101.0000	APPEARANCE = WHITE TO LIGHT STRAW CRYSTALS, 100 = YES
PURITY	COA		98.0000	100.0000	%PURITY
SETPOINT	COA		154.0000	2000.0000	154 MIN.

Chemical	Supplier Name	City	State	Spec #	
ETHYLENE OXD	VARIOUS			910093	
Test	Method	Type	Low	High	Description
%E.O.	from COA		99.5000	100.0000	99.5% min Ethylene Oxide, 300 PPM max water
%WATER	from COA		0.0100	0.0300	%moisture in EO

Chemical	Supplier Name	City	State	Spec #	
FERRIC CHLRD	VARIOUS			910182	
Test	Method	Type	Low	High	Description
FECL %	COA		96.0000	100.0000	.
FERUS CL	COA		0.0100	3.0000	.
IMPURS %	COA		0.0100	1.0000	.

Chemical	Supplier Name	City	State	Spec #	
FMC STEP 4	FMC CORP APG	BALTIMORE	MD	910129	
Test	Method	Type	Low	High	Description
STEP 4	COA	N	0.0000	2.0000	CUSTOMER APPROVED PRODUCT =2, 1= NOT APPROVED

Chemical	Supplier Name	City	State	Spec #	
FMC-80-1				910149	
Chemical	Supplier Name	City	State	Spec #	
FORMALDEHYDE	DYNEA			910211	
Test	Method	Type	Low	High	Description
FORM %	coa		44.5000	45.5000	.
MEOH, %	COA		4.5000	6.0000	.

Chemical	Supplier Name	City	State	Spec #	
FORMALDEHYDE	NESTE RESINS	WINNFIELD	LA	910191	
Test	Method	Type	Low	High	Description
FORM %	COA		44.5000	45.5000	FORMALDEHYDE
MEOH %	COA		4.5000	6.0000	.

Chemical	Supplier Name	City	State	Spec #	
FORMALDEHYDE	GEORGIA PACIFIC	TAYLORSVILLE, MS	MS	910066	
Test	Method	Type	Low	High	Description
FORM %	COA		44.5000	45.5000	44.5 - 45.5% formaldehyde / 4.5-6% Meoh

MEOH % COA 4.5000 6.0000 .

Chemical	Supplier Name	City	State	Spec #
FORMALDEHYDE	SPURLOCK ADHESIVES			910065
Test Method Type	Low	High	Description	
FORM % COA	44.5000	45.5000	44.5 - 45.5 Formaldehyde, 4.5 - 6% Meoh	
MEOH % COA	4.5000	6.0000		

Chemical	Supplier Name	City	State	Spec #
FORMIC, CYCLA	VARIOUS			910201
Test Method Type	Low	High	Description	
FORMIC % COA	G 85.0000	0.0000		

09/05/01 08:35

Raw Materials Acceptance Specs

Page # 7

Chemical	Supplier Name	City	State	Spec #	
HCL	VULCAN	BIRMINGHAM	AL	910026	
Test	Method	Type	Low	High	Description
HCL	% COA		31.5000	34.0000	31.5 - 34% HCL
Chemical	Supplier Name	City	State	Spec #	
HCL (ANHYDR.)	VARIOUS			910106	
Test	Method	Type	Low	High	Description
HCL/PURE	COA		99.0000	100.0000	99% Min. anhydrous for unit 5
Chemical	Supplier Name	City	State	Spec #	
HEPTNE DIR	CONE SOLVENTS	MEMPHIS	TN	910083	
Test	Method	Type	Low	High	Description
WATER	% COA		0.0100	0.1000	0.1% water max
Chemical	Supplier Name	City	State	Spec #	
HEPTNE BFG	CONE SOLVENTS	MEMPHIS	TN	910084	
Test	Method	Type	Low	High	Description
IBP D F.	COA		195.0000	205.0000	initial boiling point
WATER	% COA		0.0100	0.1000	.
Chemical	Supplier Name	City	State	Spec #	
HYDROGEN	PRAXAIR	MCINTOSH	AL	910086	
Test	Method	Type	Low	High	Description
HYDRO	% COA		99.9000	100.0000	99.9% min.
Chemical	Supplier Name	City	State	Spec #	
IPA-CYMP	CONE SOLVENTS	MEMPHIS	TN	910150	
Test	Method	Type	Low	High	Description
IPA %	COA		99.0000	100.0000	IPA FOR CYMP 99.0 MINIMUM
Chemical	Supplier Name	City	State	Spec #	
ISOMIBK STAM	CONE SOLVENTS	MEMPHIS	TN	910070	
Test	Method	Type	Low	High	Description
WATER	% COA		0.0100	0.4000	0.4% water max
Chemical	Supplier Name	City	State	Spec #	
ISOMIBK STAM	UNION CARBIDE	CHARLESTON	WV	910071	
Test	Method	Type	Low	High	Description
WATER	% COA		0.0100	0.4000	0.4% water max
Chemical	Supplier Name	City	State	Spec #	
ISOPHORONE	CONE SOLVENTS	MEMPHIS	TN	910038	

Test	Method	Type	Low	High	Description
WATER	% COA		0.0100	0.5000	0.5% water max

Chemical	Supplier Name	City	State	Spec #
ISOPHORONE	UNION CARBIDE	CHARLESTON	WV	910067

Test	Method	Type	Low	High	Description
WATER	% COA		0.0100	0.5000	0.5% water max

Chemical	Supplier Name	City	State	Spec #
ISOPHORONE	ACETO AGRICULTURAL CHEMS.	LAKE SUCCESS,	NY	910116

Test	Method	Type	Low	High	Description
WATER,	% COA		0.0100	0.5000	.

Chemical	Supplier Name	City	State	Spec #
ISOPHORONE	VARIOUS			910112
Test	Method	Type	Low	High
WATER	coa		0.0010	0.5000
				Description
				0.5% WATER MAX FROM COA
Chemical	Supplier Name	City	State	Spec #
LIME	BRAVO LIME COMPANY	SAGINAW,	AL	910050
Test	Method	Type	Low	High
HYDRATED	COA		1.0000	3.0000
				Description
				Hydrated grade/ 1 = no, 2 = yes
Chemical	Supplier Name	City	State	Spec #
M-680	CONE SOLVENTS	MEMPHIS	TN	910036
Test	Method	Type	Low	High
WATER %	COA		0.0101	0.5000
				Description
				0.5% water max
Chemical	Supplier Name	City	State	Spec #
MESITYL OXD.	HOECHST-CELANESE	PAMPA	TX	910047
Test	Method	Type	Low	High
WATER %	COA		0.0100	0.5000
				Description
				0.5% water max
Chemical	Supplier Name	City	State	Spec #
METHANOL	CHEMTECH	ST LOUIS,	MO	910113
Test	Method	Type	Low	High
MEOH %	COA		99.0000	100.0000
				Description
				99.0 % MINIMUM
Chemical	Supplier Name	City	State	Spec #
METHANOL	METHANEX	MEDICINE HAT,ALB, CANADA		910030
Test	Method	Type	Low	High
MEOH %	COA		99.0000	100.0000
				Description
				99.% Meoh min
Chemical	Supplier Name	City	State	Spec #
METHANOL,CYC	CONE SOLVENTS	MEMPHIS	TN	910196
Test	Method	Type	Low	High
MEOH, %	COA	G	99.0000	0.0000
				Description
				.
Chemical	Supplier Name	City	State	Spec #
METHANOL\TA	CONE SOLVENTS	MEMPHIS	TN	910168
Test	Method	Type	Low	High
ASSAY %	COA		99.0000	100.0000
IMPURS	MS-1		1.0000	2.0000
WATER %	COA		0.0100	0.2000
				Description
				.
Chemical	Supplier Name	City	State	Spec #

METHNOL\FMC	CONE SOLVENTS			MEMPHIS	TN	910137
Test	Method	Type	Low	High	Description	
% MEOH	COA		85.0000	100.0000	.	
%H2O	COA		0.0100	5.0000	.	

Chemical	Supplier Name			City	State	Spec #
METHOL-DOVER	CONE SOLVENTS			MEMPHIS	TN	910162
Test	Method	Type	Low	High	Description	
ASSAY %	COA		95.0000	100.0000	.	
H2O PPM	COA		0.0100	200.0000	.	

Chemical	Supplier Name			City	State	Spec #
METHYLATECYC	DEGUSSA					910198
Test	Method	Type	Low	High	Description	
NAMETHL%	COA		29.5000	31.0000	.	

Chemical	Supplier Name	City	State	Spec #	
MIXED ACID	EL DORADO CHEMICAL	ST. LOUIS	MO	910089	
Test	Method	Type	Low	High	Description
H2SO4 %	COA		64.0000	66.5000	Sulfuric 64 - 66.5 / Nitric = 33 -35%
HNO3 %	COA		33.0000	35.0000	Nitric
IF WATER			0.0100	1.0000	.
IS NEG.			0.0100	1.0000	.
REJECT!!			0.0100	1.0000	.
THE SHPM			0.0100	1.0000	.
WATER %	GAM-2		0.0001	0.5000	.
Chemical	Supplier Name	City	State	Spec #	
MOLINATE	HUNGARY			910178	
Test	Method	Type	Low	High	Description
MOLINT %	COA	G	96.0000	100.0000	MOLINATE %
Chemical	Supplier Name	City	State	Spec #	
MOLYB CAT.	VARIOUS			910118	
Test	Method	Type	Low	High	Description
BFG OK'D	none		1.5000	3.0000	1 = no / 2 = yes bfg approved
Chemical	Supplier Name	City	State	Spec #	
MORPHOLINE	VARIOUS			910098	
Test	Method	Type	Low	High	Description
%MORPH	COA		99.0000	100.0000	%morpholine 99% min
Chemical	Supplier Name	City	State	Spec #	
N-PROPANOL	VARIOUS			910166	
Test	Method	Type	Low	High	Description
DIST.RNG	COA		96.0000	98.0000	distillation range of 96-98C max is only spec.
Chemical	Supplier Name	City	State	Spec #	
N-PROPYL ALC	CONE SOLVENTS	MEMPHIS	TN	910170	
Test	Method	Type	Low	High	Description
PURITY	dry base		99.9000	100.0000	purity on dry basis (without water)
WATER	by wt.		0.0001	0.1000	water 0.1% max
Chemical	Supplier Name	City	State	Spec #	
NADONE	CONE SOLVENTS	MEMPHIS	TN	910037	
Test	Method	Type	Low	High	Description
WATER	COA		0.0100	0.5000	0.5% max
Chemical	Supplier Name	City	State	Spec #	

NAOH 20	CHEMTECH.			MEMPHIS	TN	910077
Test	Method	Type	Low	High	Description	
NAOH	COA		19.0000	21.0000	19 - 21% Naoh	

Chemical	Supplier Name			City	State	Spec #
NAOH 50	VULCAN			BIRMINGHAM	AL	910074
Test	Method	Type	Low	High	Description	
NAOH	% COA		48.0000	51.0000	48 - 51% Naoh	

Chemical	Supplier Name			City	State	Spec #
NAOH 50	LA ROCHE INDUSTRIES			GRAMERCY	LA	910024
Test	Method	Type	Low	High	Description	
NAOH	% COA		48.0000	51.0000	48 - 51% Naoh	

Chemical	Supplier Name	City	State	Spec #	
NAOH 50	IDEAL	MEMPHIS	TN	910072	
Test	Method	Type	Low	High	Description
NAOH	% COA		48.0000	51.0000	48 - 51% Naoh
Chemical	Supplier Name	City	State	Spec #	
NAOH 50	CONE\CO FORMOSA PLASTICS	POINT COMFORT	TX	910073	
Test	Method	Type	Low	High	Description
NAOH	% COA		48.0000	51.0000	48 - 51% Naoh
Chemical	Supplier Name	City	State	Spec #	
NAOH 50	CHEMTECH.	MEMPHIS	TN	910107	
Test	Method	Type	Low	High	Description
NAOH	% COA		48.0000	51.0000	48 - 51% Naoh
Chemical	Supplier Name	City	State	Spec #	
NAOH 50 %RAY	PIONEER	SOMEWHERE ELSE		910023	
Test	Method	Type	Low	High	Description
IRON,PPM	COA		0.0100	5.0000	.
NACL,PPM	COA		0.0100	50.0000	,
NAOH	% COA		48.0000	51.0000	48 - 51% Naoh,
Chemical	Supplier Name	City	State	Spec #	
NAOH-CYMP	CONE SOLVENTS	MEMPHIS	TN	910152	
Test	Method	Type	Low	High	Description
NAOH %	COA		0.0100	100.0000	.
Chemical	Supplier Name	City	State	Spec #	
NAOH-DOVER	VARIOUS			910158	
Test	Method	Type	Low	High	Description
H2O PPM	COA		0.0100	200.0000	.
NAOH%	COA		99.9000	100.0000	.
Chemical	Supplier Name	City	State	Spec #	
NAOH-MEM-ACI	VULCAN	BIRMINGHAM	AL	910088	
Test	Method	Type	Low	High	Description
IRON PPM	COA		0.0100	5.0000	5 ppm Max Iron
NAOH	% COA		49.0000	51.0000	49 - 51 % Naoh
Chemical	Supplier Name	City	State	Spec #	
NAOH-RAYON50	BRENNTAG MIDSOUTH			910214	
Test	Method	Type	Low	High	Description
FE, PPM	coa		0.0100	5.0000	.

NACL, PPM	coa	0.0100	50.0000	.
NAOH %	coa	48.0000	51.0000	.

Chemical	Supplier Name	City	State	Spec #	
NAOH-SOLID	CHEMTECH	ST LOUIS,	MO	910075	
Test	Method	Type	Low	High	Description
NAOH	COA		95.0000	100.0000	95% Naoh Min

Chemical	Supplier Name	City	State	Spec #	
NAOH50	VERTEX	MEMPHIS	TN	910175	
Test	Method	Type	Low	High	Description
NAOH %	COA		48.0000	51.0000	.

Chemical	Supplier Name	City	State	Spec #				
NICKEL	VARIOUS			910110				
Test	Method	Type	Low	High	Description			
RAINEY?	OR RQ?		1.0000	3.0000	SPONGE, RAINEY NICKEL	1 = NO,	2 = YES	
Chemical	Supplier Name	City	State	Spec #				
NICKEL CAT.	ACTIVATED METALS	SEVIERVILLE	TN	910117				
Test	Method	Type	Low	High	Description			
NICKEL	COA		2.0000	2.0000	1 for no,, 2 for yes			
Chemical	Supplier Name	City	State	Spec #				
NIT.ACID\FMC	EL DORADO CHEMICAL	ST. LOUIS	MO	910138				
Test	Method	Type	Low	High	Description			
% H2O	COA		0.0001	0.0001	.			
% HNO3	COA		60.0000	85.0000	.			
% OLEUM	COA		0.5000	2.5000	.			
Chemical	Supplier Name	City	State	Spec #				
NITRIC ACID	ELDORADO CHEMICAL	EL DORADO	AR	910007				
Test	Method	Type	Low	High	Description			
NITRIC %	COA		98.0000	100.0000	98% Min			
Chemical	Supplier Name	City	State	Spec #				
NITRIC ACIF	ELDORADO CHEMICAL	EL DORADO	AR	910156				
Test	Method	Type	Low	High	Description			
IRON,PPM	COA		0.0100	50.0000	Iron, ppm			
NITRIC %	COA		98.0000	100.0000	.			
Chemical	Supplier Name	City	State	Spec #				
NITROGEN	AIR PRODUCTS	DECATUR	AL	910008				
Test	Method	Type	Low	High	Description			
OXYG PPM	COA		0.0100	3.0000	3 ppm Oxygen max			
WATERPPM	COA		0.0100	3.0000	3 PPM Water max			
Chemical	Supplier Name	City	State	Spec #				
NITROGEN	PRAXAIR	MCINTOSH	AL	910186				
Test	Method	Type	Low	High	Description			
H2O,PPM	COA		0.0100	5.0000	.			
O2, PPM	COA		0.0100	8.0000	.			
Chemical	Supplier Name	City	State	Spec #				
NITROMETHANE	AUSTIN CHEMICAL			910128				
Test	Method	Type	Low	High	Description			

% NM COA 99.5000 100.0000 % Nitromethane

Chemical	Supplier Name	City	State	Spec #
NITROMETHANE	ACETO AGRICULTURAL CHEMS	LAKE SUCCESS	NY	910192
Test Method	Type	Low	High	Description
NITMET %	COA	99.5000	100.0000	.

Chemical	Supplier Name	City	State	Spec #
NITROMETHANE	WEGO	GREAT NECK	NY	910032
Test Method	Type	Low	High	Description
NM %	COA	99.5000	100.0000	99.5% min

Chemical	Supplier Name	City	State	Spec #	
NITROPROPANE	ANGUS			910215	
Test	Method	Type	Low	High	Description
1-NP %	COA		99.0000	100.0000	.
H2O %	COA		0.0100	0.2000	.
Chemical	Supplier Name	City	State	Spec #	
NORCAT	VARIOUS			910119	
Test	Method	Type	Low	High	Description
BFG OK'D	none		1.5000	3.0000	1 = no / 2 = yes bfg approved
Chemical	Supplier Name	City	State	Spec #	
ODCB	SOLUTIA	SAUGET	IL	910130	
Test	Method	Type	Low	High	Description
ODCB %	COA		98.5000	100.0000	ODCB %
PDCB %	COA		0.0100	1.0000	PDCB %
Chemical	Supplier Name	City	State	Spec #	
ODCB	STANDARD CHLORINE	DELAWARE CITY,	DE	910009	
Test	Method	Type	Low	High	Description
ODCB %	COA		98.5000	100.0000	98.5% odcb min, 1% pdcb max
PDCB %	COA		0.0100	1.0000	.
Chemical	Supplier Name	City	State	Spec #	
ODCB	METACHEM\STANDARD	DELAWARE CITY	DE	910164	
Test	Method	Type	Low	High	Description
ODCB %	COA		98.5000	100.0000	.
PDCB,%	COA		0.0100	1.0000	.
Chemical	Supplier Name	City	State	Spec #	
ODCB	PPG INDUSTRIES	NATRIUM	WV	910046	
Test	Method	Type	Low	High	Description
ODCB %	COA		98.4999	100.0000	98.5 % min ODCB, 1% max pdcb
PDCB %	COA		0.0100	1.0000	98.5%min ODCB/ 1.0%PDCB max
Chemical	Supplier Name	City	State	Spec #	
ODCB	MONSANTO	SAUGET	IL	910010	
Test	Method	Type	Low	High	Description
ODCB %	COA		98.5000	100.0000	98.5% min odcb, 1% max pdcb
PDCB %	COA		0.0100	1.0000	.
Chemical	Supplier Name	City	State	Spec #	
OLEUM \FMC	FMC	GREEN RIVER	WY	910139	

Test	Method	Type	Low	High	Description
% SULF.	COA		104.0000	105.5000	.

Chemical	Supplier Name	City	State	Spec #
ORDRAM	SYNGENTA	BUCKS	AL	910203

Test	Method	Type	Low	High	Description
ORDRAM %	COA		96.0000	100.0000	MOLINATE FOR ORDRAM

Chemical	Supplier Name	City	State	Spec #
PALLIDIUM	VARIOUS			910171

Test	Method	Type	Low	High	Description
% PALLID %			5.0000	100.0000	5% min. Pallidium on Carbon
CARBON	Number		1940.0000	10000.0000	Carbon number 1940 SWR

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Raw Materials Acceptance Specs

Chemical	Supplier Name	City	State	Spec #
PAM	KURRARAY	TOKYO	JP	910029

Test	Method	Type	Low	High	Description
PAM %	COA		97.0000	100.0000	97% min

Chemical	Supplier Name	City	State	Spec #
PBA	NIPA HARDWICKE	ELGIN	SC	910025

Test	Method	Type	Low	High	Description
PBA %	COA		98.5000	100.0000	98.5% min

Chemical	Supplier Name	City	State	Spec #
PBALD	AMERIBROM	BEER SHEVA, ISRAEL		910051

Test	Method	Type	Low	High	Description
PBALD %	COA		97.0000	100.0000	97% min

Chemical	Supplier Name	City	State	Spec #
PCE	SAFETY KLEEN	Hebron	oh	910217

Test	Method	Type	Low	High	Description
H2O, PPM	coa		0.0100	200.0000	.

Chemical	Supplier Name	City	State	Spec #
PCL3	A AND W AMERICAS	CHARLESTON	SC	910049

Test	Method	Type	Low	High	Description
PCL3 %	COA		99.0000	100.0000	99% min

Chemical	Supplier Name	City	State	Spec #
PCL3	VARIOUS			910095

Test	Method	Type	Low	High	Description
%PCL3	from COA		99.5000	100.0000	% PCL3 for Eth 99.5% min

Chemical	Supplier Name	City	State	Spec #
PE-DOVER	PERSTORP			910160

Test	Method	Type	Low	High	Description
ASSAY, %	COA		99.0000	100.0000	.
H2O, PPM	COA		0.0100	200.0000	.

Chemical	Supplier Name	City	State	Spec #
PENNSPRAY 70	PENNZOIL CO.	SHREVEPORT	LA	910148

Test	Method	Type	Low	High	Description
NAME	NAME		1.0000	3.0000	1 = NAME DOES NOT MATCH 2 = NAME MATCHES COA

Chemical	Supplier Name	City	State	Spec #
PENNZPAR 71	ATLAS PROCESSING CO			910052

Test	Method	Type	Low	High	Description
CHK GRDE	COA		1.0000	3.0000	1 = bad, 2 = good, ok

Chemical	Supplier Name	City	State	Spec #
PERKLONE D	ICI CHEMICALS & POLYMERS	WILMINGTON	DE	910155

Test	Method	Type	Low	High	Description
H2O, PPM	COA		0.0100	200.0000	.

Chemical	Supplier Name	City	State	Spec #
PHENOL-DOVER	ARISTECH			910157

Test	Method	Type	Low	High	Description
ASSAY%	COA		99.0000	100.0000	.
H2O, PPM	COA		0.0100	200.0000	.

Chemical	Supplier Name	City	State	Spec #
PLATINUM CAT	JOHNSON MATTHEY	WEST DEPTFORD	NJ	910042
Test Method Type	Low	High	Description	
PERFORM TEST	1.0000	3.0000	1=fail, 2=pass	
Chemical	Supplier Name	City	State	Spec #
PROP ANHYD.	EASTMAN CHEMICAL CO.	KINGSPORT	TN	910022
Test Method Type	Low	High	Description	
ANHYD % COA	98.0000	100.0000	98%min	
Chemical	Supplier Name	City	State	Spec #
PROP. ACID	HOECHST-CELANESE	PAMPA	TX	910041
Test Method Type	Low	High	Description	
PROP % COA	98.0000	100.0000	98%min	
Chemical	Supplier Name	City	State	Spec #
PROP. ACID	UNION CARBIDE	CHARLESTON	WV	910020
Test Method Type	Low	High	Description	
PROP % COA	98.0000	100.0000	98%min	
Chemical	Supplier Name	City	State	Spec #
PROP. ACID	EASTMAN CHEMICAL	LONGVIEW	TX	910013
Test Method Type	Low	High	Description	
PROP % COA	98.0000	100.0000	98%min	
Chemical	Supplier Name	City	State	Spec #
PTPM-TETRA	VARIOUS			910181
Test Method Type	Low	High	Description	
PTPM % COA	35.0000	72.0000	.	
Chemical	Supplier Name	City	State	Spec #
R118118	ZENECA	UNITED KINGDOM		910014
Test Method Type	Low	High	Description	
R118118% COA	33.0000	38.0000	R118118% is 33% min-38% max	
TOL, % COA	0.0000	0.0000	.	
Chemical	Supplier Name	City	State	Spec #
RUBBER	VARIOUS			910101
Test Method Type	Low	High	Description	
ASH COA	0.0001	0.2000	ALKYL LITHIUM POLYMERIZED POLYBUTADIENE = RUBBER	
COLOR COA	0.0001	10.0000	APHA ON COA COLOR	
DIS.TIME COA	0.0001	4.0000	DISSOLVING TIME = 4 HOURS MAX	
MOONEY V COA	47.0000	57.0000	ON COA MOONEY VISCOSITY	

SOL. VIS COA	147.0000	177.0000	SOLUTION VISCOSITY OF 5.43% IN TOLUENE
STABILZR COA	0.5200	1.0800	STABILIZER
TOL.INS COA	0.0001	0.0100	TOLUENE INSOLUBLES ON COA
TURBIDIT COA	0.0001	0.0001	TURBIDITY, SPEC. = CLEAR
VIS.GEL COA	0.0001	0.0001	VISUAL GELS = NIL IS SPEC.
VOL.MAT	0.0001	0.6000	VOLATILE MATTER

Chemical	Supplier Name	City	State	Spec #	
SALT	MORTON - SALT (CONE SOLV)	MEMPHIS	TN	910091	
Test	Method	Type	Low	High	Description
SALT	% COA		99.5000	100.0000	Salt % 99.5% min

Chemical	Supplier Name	City	State	Spec #	
SALT	CARGILL	MEMPHIS	TN	910027	
Test	Method	Type	Low	High	Description
SALT	% COA		99.0000	100.0000	Salt % = 99% min
Chemical	Supplier Name	City	State	Spec #	
SICL4	VARIOUS			910121	
Test	Method	Type	Low	High	Description
PURITY	COA/%wt		99.5000	100.0000	the purity is expressed in %weight, 99.5%minimum. Silvestra
Chemical	Supplier Name	City	State	Spec #	
SOD.CARB\FMC	IDEAL	MEMPHIS	TN	910140	
Test	Method	Type	Low	High	Description
% ASSAY	COA		99.2000	100.0000	.
% H2O	COA		0.0100	0.2500	.
% NAO2	COA		58.0000	100.0000	.
GRADE100	COA		0.0100	2.0000	.
GRADE160	COA		0.0100	2.0000	.
Chemical	Supplier Name	City	State	Spec #	
SODA ASH	IDEAL	MEMPHIS	TN	910053	
Test	Method	Type	Low	High	Description
MESH 100	COA		1.0000	3.0000	80-100 mesh 1 = no, 2 = yes
Chemical	Supplier Name	City	State	Spec #	
SODA ASH	VARIOUS			910122	
Chemical	Supplier Name	City	State	Spec #	
STEP 3\DMF	FMC CORP APG	BALTIMORE	MD	910132	
Test	Method	Type	Low	High	Description
% ACTIVE	COA		17.0000	20.0000	.
Chemical	Supplier Name	City	State	Spec #	
STEPFAC 8170	STEPAN	WINDER	GA	910035	
Test	Method	Type	Low	High	Description
PERFORM	PROP-7		1.0000	3.0000	1 = fail, 2 = pass
Chemical	Supplier Name	City	State	Spec #	
STEROLS	ARCHER DANIEL MIDLAND	DECATUR	GA	910172	
Test	Method	Type	Low	High	Description
STEROLS%	COA		90.0000	100.0000	TOTAL FREE STEROLS
Chemical	Supplier Name	City	State	Spec #	
STEROLS	HENKLE CHEMICALS			910173	

Test	Method	Type	Low	High	Description
STEROLS%	COA		90.0000	100.0000	.

Chemical	Supplier Name	City	State	Spec #
SULF ACID	ACI ELDORADO CHEMICAL	EL DORADO	AR	910079

Test	Method	Type	Low	High	Description
IRON PPM	COA		0.0100	40.0000	Iron ppm is 40 max, Sulf % is 93% min, Water % 7 max
SULF %	COA		98.0000	100.0000	Sulfuric Acid %

Chemical	Supplier Name	City	State	Spec #
SULF ACID	DCA ELDORADO CHEMICAL	EL DORADO	AR	910080

Test	Method	Type	Low	High	Description
SULF %	COA		98.0000	100.0000	Sulf % is 98% min

Chemical	Supplier Name	City	State	Spec #
SULF ACD DIR	ELDORADO CHEMICAL	EL DORADO	AR	910081
Test Method	Type	Low	High	Description
SULF % COA		93.0000	100.0000	Sulf % is 93% min
Chemical	Supplier Name	City	State	Spec #
SULF ACD TA	ELDORADO CHEMICAL	EL DORADO	AR	910082
Test Method	Type	Low	High	Description
SULF % COA		93.0000	100.0000	sulf % = 93% min
Chemical	Supplier Name	City	State	Spec #
SULF.ACD\FMC	CHEMTECH.	MEMPHIS	TN	910141
Test Method	Type	Low	High	Description
% ASSAY COA		93.0000	100.0000	.
Chemical	Supplier Name	City	State	Spec #
SULFURIC EO	VARIOUS			910096
Test Method	Type	Low	High	Description
%ACTIVE FROM COA		97.0000	100.0000	SULFURIC FOR SCRUBBER, % Active is 97% min
Chemical	Supplier Name	City	State	Spec #
T-500 SOLVNT	MOBIL CHEMICAL	CHALMETTE	LA	910054
Test Method	Type	Low	High	Description
CHK GRDE COA		1.0000	3.0000	1 = fail, 2 = pass
Chemical	Supplier Name	City	State	Spec #
TAP-ANTIBLZE	A AND W AMERICAS	CHARLESTON	SC	910185
Test Method	Type	Low	High	Description
COA GRADE N		0.0000	0.0000	coa for antiblaze
Chemical	Supplier Name	City	State	Spec #
TEA FOR 2AB	A TOFINA	Oakville		910216
Test Method	Type	Low	High	Description
TEA % coa		99.0000	100.0000	.
WATER, % coa		0.0100	0.1000	,
Chemical	Supplier Name	City	State	Spec #
TENNECO AV-1	CONE SOLVENTS	MEMPHIS	TN	910109
Test Method	Type	Low	High	Description
AV-1 GRD		1.0000	3.0000	1 = is not the right grade, 2 = is the right grade
Chemical	Supplier Name	City	State	Spec #
TEPA	VARIOUS			910124

Test	Method	Type	Low	High	Description
%TEPA	coa		90.0000	100.0000	tepa for dca storage

Chemical	Supplier Name	City	State	Spec #
THIONYL CHLD	BAYER CHEMICALS	BAYTOWN	TX	910017

Test	Method	Type	Low	High	Description
THIOCHL%	COA		99.0000	100.0000	99% min

Chemical	Supplier Name	City	State	Spec #
TOLUENE	EXXON	HOUSTON	TX	910019

Test	Method	Type	Low	High	Description
TOLUEN %	COA		97.0000	100.0000	% Tol 97% min, % water .05 max
WATER %	COA		0.0100	0.0500	0.05%max

Chemical	Supplier Name	City	State	Spec #	
TOLUENE/FMC	FMC	GREEN RIVER	WY	910142	
Test	Method	Type	Low	High	Description
SULFEN%	COA	N	0.0000	0.0000	.
Chemical	Supplier Name	City	State	Spec #	
TOXIMUL 804	STEPAN	WINDER	GA	910016	
Test	Method	Type	Low	High	Description
PERFORM	PROP-7		1.0000	3.0000	1 = fail, 2= pass
Chemical	Supplier Name	City	State	Spec #	
TPP-DOVER	DOVER CHEMICAL	DOVER	OH	910159	
Test	Method	Type	Low	High	Description
ASSAY %	COA		97.0000	100.0000	Assay %
COLOR	COA		0.0100	50.0000	.
Chemical	Supplier Name	City	State	Spec #	
TPP-TETRA	VARIOUS			910180	
Test	Method	Type	Low	High	Description
TPP %	COA		28.0000	65.0000	.
Chemical	Supplier Name	City	State	Spec #	
XYLENE	CONE SOLVENTS	MEMPHIS	TN	910193	
Test	Method	Type	Low	High	Description
XYLENE %	coa	G	99.5000	0.0000	.
Chemical	Supplier Name	City	State	Spec #	
XYLENE-CYCLA	CONE SOLVENTS	MEMPHIS	TN	910195	
Test	Method	Type	Low	High	Description
XYLENE %	COA	G	99.5000	0.0000	.
Chemical	Supplier Name	City	State	Spec #	
XYLENE-DOVER	CONE SOLVENTS	MEMPHIS	TN	910161	
Test	Method	Type	Low	High	Description
ASSAY %	COA		95.0000	100.0000	.
H2O,PPM	COA		0.0100	200.0000	.



Facsimile Transmittal

To: Serge Ravet **Fax:** 9-011-33-472852066

From: Geoff Pratt **Date:** 10/26/99

Re: Cyclanilide Meeting December Pages: 1
14,15

Phon 901-684-5373 **Cc:** David Guffey
e: Chris McGee

Urgent For Review Please Comment Please Reply Please Recycle

Dear Serge,

The meeting with Pierre LeRoy on December 14, 15 is ok for us. We should have enough time to complete some preliminary laboratory trials prior to the meeting. You will provide us with 1 kg samples each of CPDM and 2,4 DCA, and analytical procedures as soon as possible so that we can proceed with the trials. We will use the sulfuric acid method in the trials.

In the meantime you will send the new secrecy agreement, which when executed will allow you to send the technical package from Degussa.

Regards

Geoff Pratt

Cedar Chemical Corporation

5700 Poplar Avenue, Ste. 7414
Memphis, TN 38117
901-684-5374



Internal Correspondence

To: Chris McGee, Jim Rone
CC: A. Dinculescu
From: David C. Guffey
Date: 14 December 1999
RE: Cyclanilide 90946 Process—Process Technology Questions

Following are questions from the Rhone-Poulenc process for generation of RP-90946:

A. Coupling

1. What are purchase specs for Toluene (especially water content)?
2. Use mixed Xylenes instead of Toluene—No MeOH azeotrope. Issues?
3. How many theo stages req'd for Toluene/MeOH distillation?
4. What happens if MeOH left in reactor?
5. Third and last ¶'s of Section 5.1.5 of "Merit Note" Rev. 0, indicates final pot temp of 110°C for complete MeOH removal—is this a separate heat up step or a normal ramp-up of temperature during the final MeOH distillation?
6. When Na-CPMPA precipitates in solution—what is density and viscosity of resulting slurry?
7. Toluene/MeOH azeotrope waste or break azeotrope in Toluene recovery?
8. What is vacuum utilized for MeOH strip—controlled or FV?
9. Does Azeo strip require vacuum?
10. What increases/decreases the reaction of 2,4 DCA with the second ester group to form impurity n°6?

B. Hydrolysis

1. What are effects of too much / too little water?
2. Max Temperature listed as 100°C—what happens if temperature exceeded?
3. What is density and viscosity of resulting aqueous slurry?
4. Is there a rag layer in the decant process?
5. If there is a rag layer, does it go with the aqueous or organic phases?
6. Distillation column required for MeOH removal?
7. What happens if all MeOH not removed?

C. Acidification

1. Acidification step—stop before 1-1.5—what happens.
2. After acidification step—can we bring pH back to 4-5 from 1-1.5?

D. Isolation & Drying

1. Corrosion data for 316 stainless steel at pH 1-1.5?
2. Corrosion data for Hastelloy C-22 and/or C-276 at pH 1-1.5?
3. Bulk Density of Wet Solids from Centrifugation?
4. Bulk Density of Dry Solids?
5. What kind of dryer currently used? Operating conditions? Cp of the RP-90946?
6. What happens if dryer temperature exceeded?
7. What is melt point of solid?



5100 Poplar Avenue • Suite 2414 • Memphis, TN 38137 • (901) 685-5348 • Fax (901) 684-5398

14 July, 1999

Serge Ravet
Toll Manufacturing Manager
Rhone Poulenc
14-20 rue Baizet - B.P. 9163-69263
Lyon Cedex 09
France

Dear Serge,

Thank you for taking time to visit us on July 8th. The discussions were very helpful in defining the Cyclanilide project. We clearly have an economic challenge but I think that it can be resolved.

As agreed, I have prepared a preliminary cost estimate for the product using the information that we have available. A summary is attached. The greatest leverage item is the productivity. I show the impact of this parameter at the two levels discussed in our meeting. David Guffey will contact Pierre LeRoy to determine if Creanova's experience would suggest higher rates than we have assumed. The costs are broken down into:

A per diem production fee.

Our production fee includes all costs associated with the manufacture except, raw materials, off site waste treatment, packaging supplies and transportation to and from the plant. On site waste treatment is included in our fees but not the cost of any chemicals used in pretreatment. During startup the per diem fee is higher than during routine production.

A plant preparation and cleanout fee.

This fee covers the cost of water batching and testing, and special cleanout prior to commencing production and cleanout after production is complete. The fee is expressed as a number of days at the startup per diem rate.

We propose starting production with fees on a per diem basis until the technology has been demonstrated to our mutual satisfaction, with Rhone Poulenc's help of course. When product of acceptable quality has been made and a sustained productivity achieved Cedar will produce on a fixed cost per unit basis.

You will supply the CPDM and 2,4 DCA. We suggest that target usage ratios be set for these raw materials, which can be confirmed during the startup. When the usage ratios are confirmed, Cedar will be responsible to maintain them.

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8. Is the product thermally stable—R&D tests?

E. Toluene Recovery

1. What are details of toluene recovery—i.e. equipment utilized, operating conditions, stream compositions, recovered toluene specs, etc.
2. How many theo. stages required?
3. What is overall toluene recovery?

F. Waste Disposal

1. Typical composition of aqueous waste stream?
2. Typical composition of organic waste stream?

Raw materials supplied by Cedar and the cost of offsite waste treatment will be billed to you at our cost. You will note the high cost of sodium methoxide. We need to find a cheaper way to generate this item. We are assuming for this estimate that all waste and byproducts are revenue neutral.

New capital specific for this project is estimated to be \$300 – 600M depending upon which processing unit is finally chosen. For a three-year contract, we will not ask you to contribute to the capital directly. We will ask that you pay any non-amortized portion of the capital if you terminate the project before the contracted quantity of product is taken.

All of the above costs are represented in the attached exhibit. This is a preliminary estimate, which will be refined when we receive the commercial technology package. This estimate is sufficient to identify the key factors, which will impact your economics, with the most significant one being the productivity of our equipment. Productivity will be controlled also by your ability to supply the raw materials. You were going to check this supply capability.

I hope that this information is helpful. Please let me know if clarification is needed.

Regards,



Geoff Pratt

Cc: David Guffey
Joe Mancini
Chris McGee
Jim Rone
Randal Tomblin

7/14/99

RHONE POULENC CYCLANILIDE

	Base Case			Increased Productivity		
	Year	Year	Year	Year	Year	Year
	2000	2001	2002	2000	2001	2002
Cedar Capital M-\$	750			625		
Plant Capacity M-Kgs	402			876		
Production M-Kgs	75	150	200	75	150	200
Production Time Days	58	132	180	21	58	81
Startup Time Days	30	14	7	30	14	7
Platn Prep. & CO Days	10	10	10	10	10	10
Total Days	98	156	197	61	82	98
Raw Materials \$3.56/kg	267	534	712	267	534	712
Waste Treatment 0 lb/kg	0	0	0	0	0	0
Price Inc. Capital Rec/Kg	25.59	20.49	19.45	17.71	12.61	11.57
Average 2000-2002		20.90		13.02		

Fee \$/day		Raw Materials			
		kg/kg	\$/kg R	\$/kg Prod	
Startup	18				
Normal	16				
		Sod Methoxide 25%	2.14	1.46	3.11
		Sulfuric	0.18	1.56	0.28
		Toluene	0.62	0.26	0.16
		Total			3.56

VERTAC CHEMICAL CORPORATION NEWS

Suite 2414 • 5100 Poplar • Memphis, TN 38137 • (901) 767-6851

FOR IMMEDIATE RELEASE

Contact: David Simmons
(901) 767-5748

Potassium nitrate (KNO_3) a specialty fertilizer manufactured by Vertac Chemical Corporation, is now being distributed in the Western United States, Western Canada, and parts of Mexico by Wilson & Geo. Meyer & Co., a leading agricultural chemical marketing firm.

The fertilizer, marketed under the trade name, Vicknite, is used on grapes, tomatoes, fruits and nuts, as well as vegetable and flower crops.

"Wilson & Geo. Meyer, with over 125 years of marketing experience, has sales offices in strategic locations throughout the West," said Niven Morgan, Jr., Vertac executive vice president. "Coordinating Western distribution through their organization will improve Vertac's position as the nation's dominant supplier of potassium nitrate."

"Agricultural consumers in the West will now have a more convenient source of supply for this high-quality specialty fertilizer. As a consequence we anticipate that consumption in this geographic region will increase appreciably in years to come."

All herbicide lines will continue to be distributed through Vertac's current network of sales and distribution centers.

(more)

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Potassium nitrate produced by Vertac also has important industrial applications, including its use as a critical ingredient in the production of glass for color television picture tubes. KNO_3 is used as a major component in heat-treating agents in the steel and aluminum industries. Its ability to absorb and transfer heat makes it an ideal candidate for utilization in solar energy plants.

Vertac's Vicksburg, Miss., plant is the only potassium nitrate manufacturing facility in the United States and one of only two in the world. In addition to the Vicksburg plant, Vertac has manufacturing facilities in Jacksonville and West Helena, Ark. Vertac is also the only domestic producer of Nitrogen Tetroxide (N_2O_4), a propellant ingredient used in the space shuttle and other rockets.

Wilson & Geo. Meyer & Co., specializes in national and international marketing of agricultural and industrial chemicals, plastics and raw materials for a number of manufacturers. The company maintains major offices in 11 Western states and sales offices in other areas.

#

VERTAC CHEMICAL CORPORATION NEWS

Suite 2414 • 5100 Poplar • Memphis, TN 38137 • (901) 767-8851

FOR IMMEDIATE RELEASE

Contact: David Simmons
761-5748

VERTAC BUYS BUTOXONE BUSINESS

Vertac Chemical Corporation announced today the purchase of the Butoxone brand 2,4-DB broadleaf herbicide business from Rhone-Poulenc, Inc. The sale is effective immediately and includes all assets, other than plant equipment, such as labels, tradenames, process and formulation technology, toxicological and efficacy data, existing inventory, and marketing information.

Butoxone is a broadleaf herbicide used to control weeds in soybeans, peanuts, and alfalfa. On a cost performance basis, 2, 4-DB is the most economical broadleaf herbicide available to a grower. It offers a grower timing flexibility and can be tank mixed with other herbicides.

With the Butoxone purchase, Vertac adds another series of products to its rapidly expanding line of economical herbicides. Vertac President C. P. Bomar, Jr., comments, "Butoxone is a valuable addition to our arsenal of soybeans and peanut herbicides, allowing Vertac to offer the grower a well-rounded and economical weed control program. The purchase of the Butoxone business is the third in a continuing series of growth oriented acquisitions for Vertac."

Vertac's line of herbicides includes Premerge 3, General Weed Killer, Selective Weed Killer, and Weed-Rhap and Brush-Rhap 2,4-D products. In addition to Butoxone and Butoxone Ester, other new products introduced in 1983 are Premerge Plus, VERSAR brand MSMA and DSMA products, and the Bollseye, Broadside, and Phytar 560 series of Cacodylate products.

Vertac is a Memphis-based firm producing agricultural and industrial chemicals at plants located in Vicksburg, MS; Jacksonville, AR; and West Helena, AR. Vertac is also the only U. S. producer of nitrogen tetroxide, a fuel oxidizer used in the Space Shuttle and other rocket systems.

#

AB0000064604

VERTAC CHEMICAL CORPORATION NEWS

Suite 2414 • 5100 Poplar • Memphis, TN 38137 • (901) 767-6851

For Immediate Release

Contact: David Simmons
(901) 761-5748

VERTAC ANNOUNCES MSMA PLANT STARTUP

Vertac Chemical Corporation today announced the successful startup of the firm's new \$3 million MSMA herbicide facility located at its 600-acre Vicksburg, Mississippi, plant site.

An existing production unit was redesigned and expanded for the manufacture of MSMA (monosodium methane arsonate) and sodium cacodylate, a related product. According to Vertac President C. P. Bomar, Jr., the cost of the project is to be financed, in part, by Industrial Revenue Bonds authorized by the State of Mississippi.

MSMA, a broadleaf herbicide for weed control in cotton and industrial rights-of-way, will be marketed under the trade name, VERSAR. With shipments beginning in February, the product will be available in three concentrations as VERSAR 400, 600, and 660.

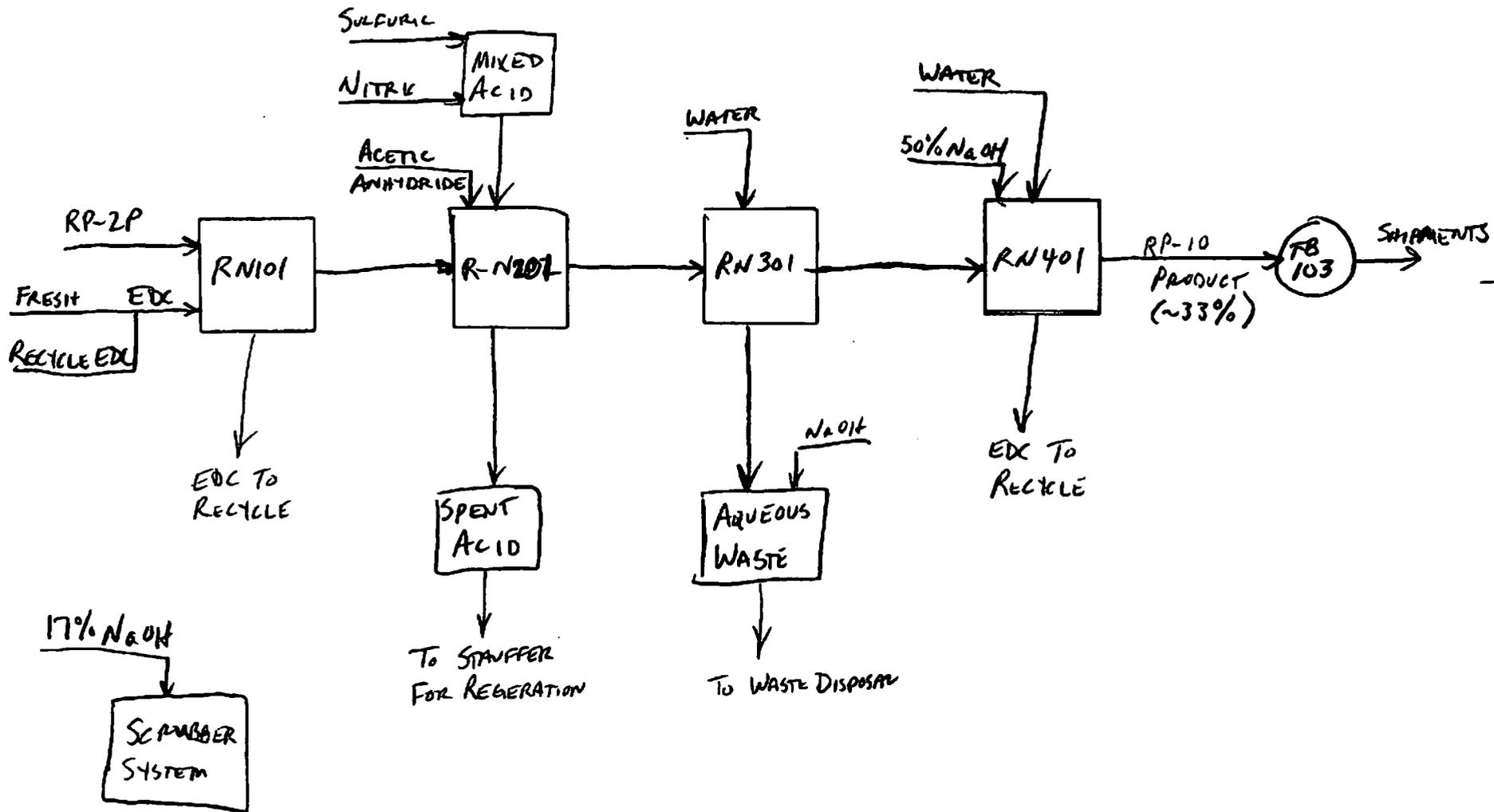
"The addition of the VERSAR product line is an important next step in Vertac's continuing expansion as a basic manufacturer and marketer of commodity agricultural chemicals," said Bomar. "In addition to Versar, Vertac has introduced Premerge Plus herbicide, and expanded our 2-4D production facility. With these moves we expect our total herbicide sales to increase by at least \$10 million in 1983. We have built a strong reputation as a quality producer of effective low-cost herbicides which are in particular demand because of today's agricultural economy", Bomar said.

Premerge Plus is a Vertac herbicide for weed control in soybeans and peanuts and is now available for the 1983 agricultural season.

Vertac is a Memphis-based firm producing agricultural and industrial chemicals at plants located in Vicksburg, MS; Jacksonville, AR; and West Helena, AR. Vertac is also the only U.S. producer of nitrogen tetroxide, a fuel oxidizer used in the Space Shuttle and for other rocket systems.

#

AB0000064604



RHÔNE-POULENC INC.

P O Box 125 - Black Horse Lane - Monmouth Junction, New Jersey 08852 - Telephone (201) 297-0100 - Telex 844527

January 19, 1987

Mr. C. Parker
Cedar Chemical Corporation
Highway 242 South
W. Helena, AR 72390

Dear Charlie:

Enclosed are the Receiving Report sets for the raw materials required for the production of RP 10.

Also enclosed is a supply of Blanket Purchase Order Release forms.

It is NOT necessary for you to send to my attention the weekly reports. I only wish to receive the monthly report recapping that month's production.

Please let me know if I can be of further assistance.

Yours truly,

RHONE-POULENC INC.



E. Schroder
Purchasing Agent

ES/lp
Enclosures



ADEQ0017559

CEDAR CHEMICAL CORPORATION

24th Floor • 5100 Poplar Avenue • Memphis, TN 38137 • 901-685-5348

REPLY TO: P. O. BOX 2749
WEST HELENA, AR 72390
(501) 572-3701

1/15/87

Jean-Pierre DalPont
Rhone-Poulenc Inc.
P.O. Box 125
Monmouth Junction, N.J. 08852

Re: Spent Acid - RP-10

Dear Jean-Pierre,

Per discussions with Hank Teschendorff & Michel Royer, Cedar will handle the spent acid from RP-10 as per the waste handling provisions in our agreement. I have signed the test burn agreement with Stauffer and returned it to them. The costs/credits received by Cedar from Stauffer and the transportation costs for the spent acid will be invoiced to Rhone-Poulenc.

Regards,



John Miles

cc: Geoff Pratt

ADEQ0017559

OFFICE MEMORANDUM

CC: Kay Hall
Charlie Parker
Neil Robbins
Geoff Pratt

DIVISION AGROCHEMICALS

To: Distribution Date: December 19, 1986
From: G. P. Varn Subject: RP-15
GPV/86/699

I told John Miles (Cedar) today in answer to his question, that he should make at least 930,000 lbs. of RP-15 and schedule to exhaust new raw materials thereafter based on the most expensive material.


G. P. Varn

GPV:jmp

Distribution

J. N. Harton
E. M. Schroder
M. Royer
J-P Dal Pont
R. J. Rosenberg
P. Bertling (FRE)
J. Miles



ADEQ0017559

cc: J. Miles
T. Lodge
C. Parker
N. Robbins

From: Clay Pace

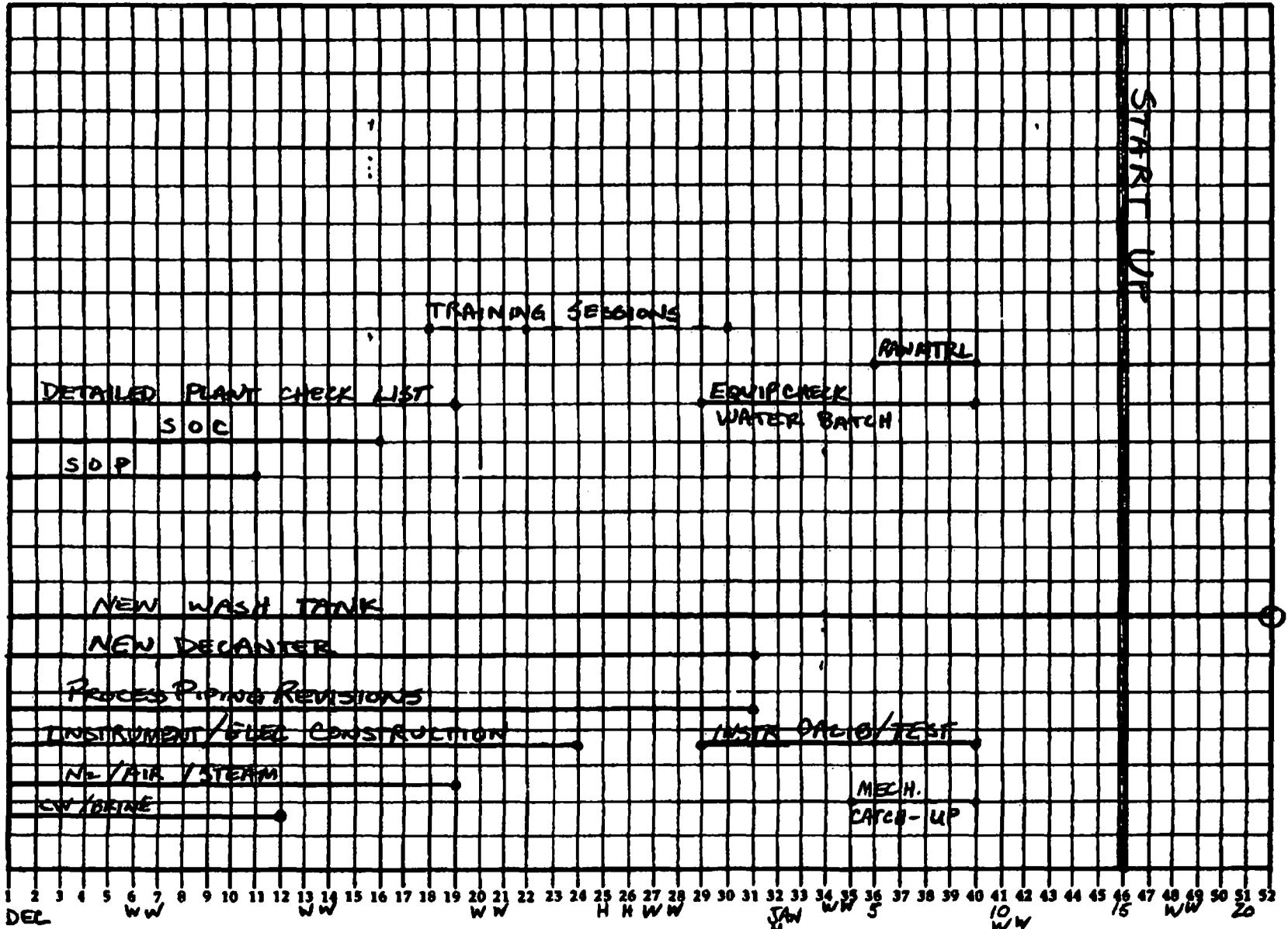
RPI - Raw Material Initial Shipments

- verified by M. Roger. 12/17/86 by C. Pace
C. Parker to coordinate shipments.

EDC	120,000 #
N_2SO_4	40,000 #
HNO_3	40,000 #
Acetic Anhydride	40,000 #
45% NaOH	40,000 #

CEDAR - WEST HELENA
 RP-10 COMPLETION SCHEDULE

12/8/86



RP-15 YIELD

THEORETICAL YIELD

$$\text{LBS CRESOL CHARGED} \times \frac{286.7}{108.1} = \frac{102,6522 \times \text{M-CRESOL}}{\text{LBS THEORETICAL RP-15}} \cdot (100\%)$$

98.66% YIELD = $\frac{\text{ACTUAL LBS (100\%)}}{\text{THEORETICAL LBS (100\%)}}$

WASTE WATER INV. % x 20,000 gal

PLANT STATUS: PER R. JONES

	lbs/gal
CRESOL	8.67
KOH	12.09
BTF	12.09
DMAC	7.88
RP-15	10.7

L/D/A/C/E PER lb of RP-15

CRESOL	.5
BTF	.78
KOH	.56
DMAC	.25
W/W	1.5

DCA Purchases from R-P Detail:

Date	Vendor	Inv. #	DCA		Load	ODCB Used lbs	DCA Purch lbs	Amount	Units Pr
			kg	lbs					
A/Ps R-P:									
4/27/1999	P-P	60132483	44,000	97,002				85,800.00	0.885
5/4/1999	P-P	60132668	32,000	70,547				62,400.00	0.885
A/P's Misc:									
6/30/1999	Gilscot	55266						28,116.02	
ODCB Used									
5/31/1999	ODCB Used	JV03-5-38				174,168		64,442.16	0.370
Sub Total								238,758.18	1.425
Value Transferred to Inventory:									
5/31/1999	DCA Purchased	JV03-5-55					187,549	(212,642.16)	1.289
10/31/1999	DCA Purchased	JV03-10-55						(26,116.02)	
Balances			78,000	187,550		174,168	187,549	0.00	

DCA Purchases from Biesterfeld Detail:

Date	Vendor	Inv. #	DCA		Load	ODCB Used lbs	DCA Purch lbs	Amount	Units Pr
			kg	lbs					
A/Ps R-P:									
7/3/1999	Biesterfeld	2533AG221	12,000	26,455				38,600.00	1.383
A/P's Misc:									
8/24/1999	Gilscot	55412						5,709.02	
9/30/1999	Gilscot	55412						140.00	
Sub Total								42,449.02	1.605
Value Transferred to Inventory:									
8/31/1999	DCA Purchased	JV03-8-55					28,455	(26,984.10)	1.020
10/31/1999	DCA Purchased	JV03-10-55						(15,464.92)	
Balances			12,000	26,455		0	26,455	0.00	

Rhône-Poulenc Agro

14-20 rue Pierre Baizet - B.P. 9163
 69263 Lyon Cedex 09 - France
 National Tel. 04 72 85 25 25 - Fax 04 72 85 27 99
 International Tel. +33 4 72 85 25 25 - Fax +33 4 72 85 27 99
 N° identificateur TVA FR 53 969 503 333

ORIGINAL

INVOICE NO: 60132668 DATED 04.05.1999
 STAT : 065 01/91

CONSIGNEE: HUEMV
 NORTH HUNGARIAN CHEMICAL
 EMV
 3792 SAJOBABONY
 HUNGARY

INVOICEE: USCEDAR
 CEDAR CHEMICAL CORPORATION
 ATTN : BOB CHRISTIAN
 P.O. BOX BOX 2749
 72390 WEST HELENA/AR
 UNITED STATES

MAY 27 1999

O/REF : 01 40139831/0010
 Y/REF : 040-33778
 SHIPPING BY : BETZ FRANCE
 TERMS OF DELIVERY : DDU-DELIV UNCLEARED
 TERMS OF PAYMENT : 90 DAYS INVOICE DATE
 PAYMENT DATE : 02.08.1999
 PAYMENT MODE : TELEGRAPHIC TRANSFER
 CURRENCY : USD

IN KUHNE ET NAGEL

EOC : SAJOBABONY

PRODUCT CODE : 19931VVRC
 CUST.MATERIAL NO : 3,4 DCA
 QUANTITY : 32000,00 KG
 UNIT PRICE : 1,95 USD PER 1 KG
 AMOUNT : 62.400,00 USD

SH N° : 29214210

70,547 * DCA TRANS TO EMV
 73,334 * ODCB USED

MARKING

RHONE POULENC AGRO
 3,4-DCPI
 CEDAR / USA
 N.W.....
 G.W.....
 NR.....

62.400,00 USD

1 des Impôts

VENDOR #		INVOICE #	
24804		60132668	
PO. #	REC. RPT #	INV. CD	INV. DATE
33778		1	030499
TERMS CODE	DUE DATE	FRT BILL CD	SALES ORDER #
D	8-2-99		
INVOICE AMT.		DISC ALLOWED	
62,400.00			
GL NUMBER	AMOUNT	WORK ORDER #	
S 4 1590	62,400.00	235	

RHÔNE POULENC
 SECTEUR AGRO
 Rue Pierre Baizet - B.P. 9163
 69263 LYON CEDEX 09
 72 85 25 25 - Fax 04 72 85 27 99
 ☎ 369 503 309 - Capital 1 431 51



WESTRADE INC.

10260 Westheimer, Suite 230 • HOUSTON, Texas 77042
Phone: (713) 785-0053 Telex: 795110 Fax: (713) 977-3727

COMMERCIAL INVOICE

No 000074

DATE 18-Mar-99

TERMS OF SALE 60 DAYS

S
O
L
D

CEDAR CHEMICAL CORPORATION
P O BOX 2749 - HWY 242 SOUTH
WEST HELENA AR 72390

M
A
R
K
S

P.O 04-023454

INVOICE No.		SHIPPED VIA		TOTAL PKGS:	YOUR ORDER No.	YOUR REQ. No.
		INLAND FREIGHT		TOTAL WTS:		
				234 DRUMS		
ITEM No.	QTY ORDERED	QTY BACK ORDER	QTY SHIPPED	DESCRIPTION	UNIT PRICE	TOTAL
			128 669 LB	3,4 DCA FCA HUNGARY		190,725 50
				ORIGIN. BAYER LEVERKUSSEN GERMANY		
				EX WORKS	US\$ 185 715 50	
				FREIGHT	US\$ 5 000 00	
				FCA HUNGARY	US\$ 190,725 50	
				***UNIT PRICE	\$1 478847	

MAR 30 1999
WEST HELENA

VENDOR #		INVOICE #	
32516		74	
P.O. #	REC RPT #	INV. CD	INV. DATE
23454		1	031899
TERMS CODE	DUE DATE	FRT BILL CD	SALES ORDER #
5			
INVOICE AMT	DISC ALLOWED		
190,725 50			
GL NUMBER	AMOUNT	WORK ORDER #	
C153 5910	190,725 50		
		198	

ATION

PLARES CONSIGNADOS EN LA DESTINATARIO POR CUALQUIER

Recex

Rhône-Poulenc Agro
 14-20, rue Pierre Baizet - B P 9163
 69263 Lyon Cedex 09 - France
 Tel 04 72 85 25 25 - Fax 04 72 85 27 99
 Telex 310 098 F Rhône
 N° identification TVA FR 53 969 503 309

ORIGINAL

MAY 27 1999

WEST HELDIA

INVOICE NO: 60132483 DATE: 07.04.99
 STAT : 025 01 91

CONSIGNEE: HUENY
 NORTH HUNGARY CHEMICAL
 EMV
 3792 SAJOBABONY
 HUNGARY

INVOICEE: USCENAF
 LEONAR CHEMICAL CORPORATION
 ATTN: BOB CHRISTIAN
 P.O. BOX BOX 2743
 72390 WEST HELDIA AR
 UNITED STATES

REF : 01 40132483 0010
 REF : 04030778
 SHIPPING : BETS FRANCE
 TERMS OF DELIVERY : F.O.B. UNCLEANED
 TERMS OF PAYMENT : 30 IN 5 INVOICE DATE
 PAYMENT DATE : 28.07.1999
 PAYMENT MODE : TELEGRAPHIC TRANSFER
 CURRENCY : USD

INC-6921-76
 EOC : SAT. 8-3100

PRODUCT CODE : 1993 CLR
 COST MATERIAL NO : 314 DC-
 QUANTITY : 440 000 KG
 UNIT PRICE : 1.95 USD PER 1 KG
 AMOUNT : 85,800.00 USD

SH N° : 1921401

97,002# DCA SALE TO E1
 100,834# DCB USED

PHONE: POULENC AGRO
 314-0001

VENDOR #		INVOICE #	
24804		60132483	
P.O. #	REC. RPT. #	INV. CD	INV. DATE
33778		1	042799
TERMS CODE	DUE DATE	FRY. BILL CD	SALES ORDER #
D	7-26-99		
INVOICE AMT		DISC ALLOWED	
85,800.00			
GL NUMBER	AMOUNT	WORK ORDER #	
4 1590	85,800.00	235	

RHÔNE POULENC
 SECTEUR AGRO
 Rue Pierre Baizet - B P 9163
 9263 LYON CEDEX 09
 85 25 25 - Fax 04 72 85 27 99
 1 969 503 309 - Capital 1 431 515 000 F

Jun-07-98 10:38am

From CEDAR CHEMICAL

+8016845388

T-384 P 06/13 F-761

Rhône-Poulenc Agro

14-20, rue Pierre Belzet - A.P. 9183
69263 Lyon Cedex 09 - France
TEL 04 72 85 25 25 - Fax 04 72 85 27 99
Télex 370 098 F Rhône
N° identification TVA : FR 53 969 503 309

ENTRADO

MAY 27 1998

WEST HELENA

DEBIT NOTE

NO: 60124126 DATED: 11.09.1998

USCEDAR
CEDAR CHEMICAL CORPORATION
ATTN: BOB CHRISTIAN
P.O. BOX 2749
72390 WEST HELENA/AR
UNITED STATES

INVOICE : USCEDAR
CEDAR CHEMICAL CORPORATION
ATTN : BOB CHRISTIAN
P.O. BOX 2749
72390 WEST HELENA/AR
UNITED STATES

Y/REF : A SUIVRE
TERMS OF PAYMENT : 90 DAYS INVOICE DATE
PAYMENT DATE : 09.09.1998
PAYMENT MODE : TELEGRAPHIC TRANSFER
CURRENCY : USD

0010" 19931VVRC 34 DCA OUVRAISON CEDAR VVRC
O/REF : 01/60122288/0010/0000
PRODUCT..... : 34 DCA OUVRAISON CEDAR VVRC
NET VALUE 1 : 128.845,90 USD
O/ORD: 01/40132320/0010/0000

128.845,90 USD

ITEM TOTAL

128.845,90 USD

TOTAL TO BE PAID

FOR THE DCA TRANSPORT AND CONTAINERS RENTAL

VENDOR #		INVOICE #	
24804		60124126	
PD #	REC RPT. #	INV CD	INV DATE
		1	061198
TERMS CODE	DUE DATE	FRY BILL CO	SALES ORDER #
D	9-9-98		
INVOICE AMT		DISC ALLOWED	
128.845,90			
GL NUMBER	AMOUNT	WORK ORDER #	
01535610	128.845,90	235	

IF MAIL : 205,81...
US...
LIGNE DU LE HAVRE : ...

AB000006

JUN 01 1999 10:30AM FROM: LEVYER LREMICAL
Rhône-Poulenc Agro
 14-20, rue Pierre Boizat - B.P. 9163
 69263 Lyon Cedex 08 - France
 Tél. 04 72 85 25 25 - Fax 04 72 85 27 89
 Télex 310 098 F Rhône
 N° identification TVA : FR 53 969 503 309

78018643388

1-389 P 10/13 P 12

ENTFERN

MAY 27 1999

WEST HELENA

DEBIT NOTE

INVOICE # 6032001
 CEDAR MEDICAL CORPORATION
 ATTN: BOB CHRISTIAN
 P.O. BOX 274
 72390 WEST HELENA, AR
 UNITED STATES

USLEVER
 CEDAR MEDICAL CORPORATION
 ATTN: BOB CHRISTIAN
 P.O. BOX 274
 72390 WEST HELENA, AR
 UNITED STATES

Y/REF : A SUIVRE
 TERMS OF PAYMENT : 30 DAYS INVOICE DATE
 PAYMENT DATE : 09.09.1998
 PAYMENT MODE : TELEGRAPHIC TRANSFER
 CURRENCY : USD

0010 : 19931VVV0 34 DCA QUVAISON CEDAR VVAC
 O/REF : 01/60121289/0010/0600
 PRODUCT : 34 DCA QUVAISON CEDAR VVAC
 NET VALUE 1 : 45.475,40 USD
 O/ORD: 01/40132320/0010/0600

ITEM TOTAL

45.475,40 USD

TOTAL TO BE PAID

45.475,40 USD

VENDOR #		INVOICE #	
24804		60121289	
PO #	REC RPT #	INV CD	INV. DATE
		1	06/19/98
TERMS CODE	DUE DATE	FRT BILL CD	SALES ORDER #
D	9.9.98		
INVOICE AMT		DISC ALLOWED	
45,475.40			
GL NUMBER	AMOUNT	WORK ORDER #	
01535910	45,475.40	235	

B
Blesterfeld
 Blesterfeld U.S., Inc.
 500 Fifth Avenue
 New York, NY 10110

INVOICE

CEDAR CHEMICAL CORP.
 5100 POPLAR
 MEMPHIS TN 38137

AUG 30 1999

WEST ALLENA

Inv./Ref. No. 2533/AG-2213

Date: JULY 3, 1999

Ship From: JARWARHAL NEHRU
 PORT

Basis: CIF NEW ORLEANS, LA

Freight: PREPAID

Payment Terms: NET 30 DAYS B/L
 DATE

A LATE PAYMENT CHARGE OF 1% COMPOUNDED MONTHLY WILL BE APPLIED TO ANY AMOUNTS OUTSTANDING AFTER DUE DATE.

PRODUCT	QUANTITY	PRICE	AMOUNT
3,4 DICHLOROANILINE PURITY 98.5 %	12,000 KGS	US\$3.05/KG (CIF)	US\$36,600.00

ORIGIN: INDIA

PACKING:

240 X 50 KG NET DRUMS
 TOTAL NET WT = 12,000 KGS
 TOTAL GROSS WT = 13,560 KGS

FOB VALUE US\$34,430.91
 FREIGHT 2,000.00
 INSURANCE 169.09

\$36,600.00

VENDOR #		INVOICE #	
3228		2533AG221	
P.O. #	REC RPT #	INV. CD	INV DATE
64429		1	070399
TERMS CODE	DUE DATE	FRT. BILL CD	SALES ORDER #
2			
INVOICE AMT		DISC ALLOWED	
36,600.00			
GL NUMBER	AMOUNT		WORK ORDER #
24	36,600.00		

RECT
 ?
 INC.

	CEDAR WEST HELENA												CC	C McGEE		R Farshaid		Mo Book		Y-T-D	#/B or Gal	Std
	PROPANIL PRODUCTION AND USAGE													G Satterfield	P Fields	File Copy						
	AS OF		Oct-89											B Christian	J Rone							
FINISH GOODS MFG	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec										
DCA	1,008,106	1,057,745	1,010,116	1,388,929	1,183,176	1,058,511	1,071,128	1,209,153	907,253	649,737			10,521,854									
ODCB	1,138,109	1,120,877	1,291,878	1,649,398	1,365,079	1,093,501	1,268,813	1,256,360	1,001,527	719,586			11,903,128	1 1313	1 1300							
Nitric Acid	492,059	474,881	542,539	728,842	618,875	518,841	583,122	547,384	414,627	323,785			8,223,815	0 4865	0 4870							
Sulfuric Acid	871,379	911,899	1,080,090	1,378,989	1,210,131	897,605	1,078,457	1,041,074	777,491	574,825			9,890,950	0 8400	0 8550							
Plat/Carb Cata	262	265		381	355	401	547	557	411	327			3,783	0 0004	0 0003							
Hydrogen	51,718	48,928	58,409	72,841	63,288	53,604	65,278	56,021	44,788	41,788			358,740	0 0629	0 0510							
Soda Ash	12,018	2,608	10,976	9,454	4,030	1,652	1,296	4,684	888	2,768			50,372	0 0048	0 0110							
Lime	37,600	23,400	27,400	33,600	32,100	23,100	40,100	28,700	24,000	24,300			294,300	0 0280	0 0305							
Caustic 50%	73,386	47,210	29,724	48,095	68,323	83,629	52,578	25,589	29,080	58,418			518,012	0 0490	0 0182							
Hydr Peroxide	8,000	1,000	4,000	7,500	8,500	3,000	3,000	5,500	1,500	7,000			49,000	0 0047	0 0050							
Methanol	1142												1,142	0 0001								
TEPA	681	853	533	346	859	520	286	502	604	822			6,206	0 0008	0 0008							
Ferrous Sulfate	138	50	125	213	225	75	125	125	87	175			1,338	0 0001	0 0001							
Propanil Tech	1,088,110	1,498,470	1,389,885	1,500,572	1,351,740	703,680		883,105	1,580,023	1,278,030			11,029,415									
DCA	834,620	1,127,520	1,011,563	1,151,322	991,940	605,440		680,400	1,021,595	869,414			8,294,014	0 7520	0 7550							
P Acid	455,484	613,326	568,309	644,465	580,356	280,683	152	408,296	572,870	561,415			4,673,358	0 4237	0 3707							
P Arthy	2,110	992		1,081	3,885			1,738	8,369	37,783			54,068	0 0049	0 0160							
Plaked Tech	105,000	48,500	22,500	369,000	729,000	268,500			888,203	835,500			3,344,203									
P Tech	105,000	48,500	22,500	369,000	729,000	268,500			888,203	835,500			3,344,203	1 0000	1 0000							
2# Bulk	20,845			26,880	8,877	85,880		13,753	84,327	68,683			311,056									
P Tech	63,230			85,853	31,800	278,000		47,530	271,850	220,720			897,883	3 2084	3 2160							
Isoph	40,200			59,219	20,000	174,360		20,950	170,640	141,991			627,260	2 0168	2 2500							
MO						2,970			2,500				5,470	0 0178	0 0143							
Emul																						
Aromatic B	39,629			48,377	22,011	154,240		26,550	151,240	123,140			565,186	1 8170	1 8120							
Armud	28,080			35,679	13,040	110,360		19,500	111,340	77,393			393,392	1 2647	1 2683							
Sun Oil	6,680			11,890	4,345	37,784		6,600	37,120	30,170			138,499	0 4388	0 4300							
Term 500																						
4# Bulk	20,300	89,488	134,533	32,876	105,720	35,578			61,971	94,341			584,707									
P Tech	84,040	414,605	539,255	135,805	442,710	134,870			222,400	392,010			2,365,485	4 0458	4 1500							
Isoph	15,020	78,887	101,537	24,308	80,280	25,150			45,485	71,350			439,995	0 7525	0 7200							
MO	80,100	288,590	390,039	97,087	331,319	98,238			160,190	283,825			1,719,386	2 9405	2 7400							
Emul	19,680	97,604	128,385	30,225	103,535	31,878			58,628	104,320			572,033	0 8783	0 8250							
Aromatic B																						
Armud																						
Isoph/Mibk																						
4# X Bulk	40,877				4,885				125,189				171,041									
P Tech	168,940				20,760				514,000				703,690	4 1142	4 1270							
MO	67,600				8,280				211,725				287,615	1 6816	1 7620							
Isoph	67,600				8,280				205,170				281,060	1 6432	1 6880							
Emul	33,819				3,880				88,835				138,534	0 7883	0 7820							
Sun Oil	16,400				2,000				49,570				67,970	0 3974	0 3041							
Aromatic B																						
Armud	7,200				880				21,820				30,000	0 1754	0 3844							
5# Bulk	75,631	178,838	97,188	103,824	30,265	14,130							500,886									
P Tech	319,185	753,350	405,130	428,894	127,485								2,034,064	4 0801	4 1270							
Isoph/Mibk	280,720	683,130	393,141	408,213	145,271								1,920,475	3 6334	3 8280							
Emul	67,780	180,945	88,740	83,843	27,025								438,333	0 8709	0 9030							
Isoph		250											250	0 0006								
MO																						
Diuron-Days		14	31	80									75									
Standard Grade		131,400	259,200	183,661									574,261									
B Grade																						
DCPI		118,900	214,600	143,800									477,300	0 8312	0 8340							
DMA		28,520	53,990	35,815									118,725	0 2087	0 2100							
Heptane		4,988	12,231	6,104									23,301	0 0408	0 0716							
Sulfuric Acid																						
50% Rayon Caustic																						

FINISHED GOODS MFG CONT'D		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Y-T-D	# of Gal	Std
TA-Days																
	Prod															
	Nitromethane															0 7600
	Formaldehyde															2 5000
	Methanol															0 2460
	Sulfonic Acid															0 0660
	Raney Nickel															0 0110
	Hydrogen															0 1420
	50% Caustic															0 1000
Wham	Prod	100,600	8,370	50,100	102,709	116,140	115,730	10,440						604,289		
	Flake Tech	180,000	204,000	218,000	522,000	228,908	398,000	13,224						1,758,130	3 4864	4 1240
	Monwet	7,760	9,400	9,000	21,690	9,100	16,500	300			4,885			78,725	0 1561	0 0570
	Polyfon O	210	238	262	609	283	462	14			(328)			1,720	0 0034	0 0100
	Glycerine	10,600	11,900	12,600	30,450	13,251	23,100	817			(8,456)			99,162	0 1668	0 2430
	Alfonic													13,571	0 0269	0 3890
	Kelzan	390	442	468	1,131	471	858	14			114			3,888	0 0077	0 0060
	Vasgum	8,340	9,490	10,080	24,050	9,762	13,020	600			4,802			80,134	0 1589	0 1170
	Antifoam DC 1500	320	362	372	699	348	488	17			1,157			3,959	0 0079	0 0010
	Technical Carbaryl	300	340		870	375	660	20			(1,360)			1,205	0 0024	0 0070
	Ethephon	200	227	240	580	230	440				97			2,014	0 0040	0 0040
	Soprophor 40384	18,680	22,304	23,616	97,072	24,594	43,296	1,260			7,898			188,718	0 3960	0 1460
	Proxal	1,203	2,655	1,478		47	605				678			6,665	0 0132	
	Formaldehyde	58	284	365			117							825	0 0018	
	Glutaraldehyde						5,082	162						24,021	0 0580	
Duet	Prod			138,600	62,620	2,480								203,580		
	Flake Tech			457,500	329,400									786,900	1,6604	4 1240
	Vasgum			21,000	15,120									38,081	0 0755	0 1170
	Glycerine			27,000	19,440						(1,411)			45,029	0 0893	0 2430
	Soprophor 40384			49,500	85,840						3,225			88,365	0 1762	0 1460
	Monwet			18,750	13,500						2,036			34,286	0 0680	0 0970
	Polyfon O			525	378						(134)			769	0 0015	0 0100
	Ethephon			500	360						40			900	0 0018	0 0400
	Proxal			3,075	3,913						278			7,266	0 0144	
	Formaldehyde			735	675									1,410	0 0028	
	Antifoam			775	658						472			1,805	0 0038	0 0010
	Benzulfuron			3,625	2,638									6,063	0 0120	
	Kelzan			875	702									1,723	0 0034	0 0060
Butox 175	Prod				18,691	14,680	17,417	10,523	4,838					66,947		
	2-4 D-B Acid				35,715	26,780	32,100	18,420	8,955					121,970	1 8495	1 8000
	DMA				16,645	12,755	14,820	9,087	4,468					57,775	0 8781	0 8000
	Citic Acid				4,865	3,660	4,385	2,625	1,217					18,832	0 2552	0 2800
Butox 200	Prod	10,840	1,660					1,380	5,645	15,825				35,250		
	2-4 D-B Acid	23,060	3,690					3,570	8,670	32,963				69,033	1 9584	2 0800
	DMA	12,540	2,010					1,705	7,625	17,877				41,857	1 1874	1 1000
	Citic Acid	4,685	760					485	2,675	6,405				14,690	0 4224	0 4200
Butox 7500	Prod									47,325	6,425			53,750		
	2-4 D-B Acid									38,611	3,277			41,888	0 7793	0 7650
	Continental Clay									7,720	(281)			7,439	0 1388	0 1840
	Hi 58 233									275	2,038			2,313	0 0430	0 0060
	Steparse DF 200									2,903	(404)			2,499	0 0485	0 0600
	Steparse DF 85									275	(23)			252	0 0047	0 0060
FINISH GOODS PKG (Number Containers)		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Y-T-D Containers	Total Gals/Lbs	Grand Total
	Prop 360 35 g															
	Prop 360 200L															
	Prop 380 210L															
	Superox 380 200L															
	3# 20L				4,673	69		182		1,683				6,907	35,941	
	3# 60L								(2)					(2)	(20)	
	3# 200L					213	1,641	82	1,245	1,730				4,811	254,213	
	3# 55L	378												378	20,645	310,973
	4# 20L					440								440	2,323	
	4# 35		3,526	3,776		1,887	1,088			1,025	2,841			14,233	498,185	
	4# 200L	528				8				2,283				2,820	149,009	
	4# 210L															
	4# 65	225	(14)						88					307	16,885	
	Superox 480 200L															

FINISH GOODS PKG CONT'D (Number Containers)														Y-T-D	Total	Grand
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Containers	Gals/Lbs	Total	
Propanex 4# 35																
Propanex 500 55 g																666,372
Stam 35	1,337	3,637	3,585	2,818									11,357	397,485	397,485	
Tham 25 g																
Pure Tromethamine 2																
Trometamol 25 Kg																
Trometamol 60 Kg																
Tra Ultra Pure 100Kg																
Pure Trish Mcl 100 Kg																
Wham Bulk				17,359	8,200								25,559	25,559		
Wham 2x2.5						5							5	25		
Wham 5																
Wham 100 L																
Wham 30																
Super Wham 2x2.5						5							5	25		
Super Wham 30	3,360	278	1,870	2,845	3,598	3,856	348						15,956	478,680	504,289	
Duet 30			4,620	2,084									6,704	201,120	201,120	
Bandit 200L																
175 4x1				2,029	3,670	763	2,412	1,159					10,033	40,132		
178 2x2.5				2,116		2,875	175						5,165	25,825		
175 65																65,857
200 4x1																
200 2x2.5	2,169	332					276	1,109	3,165				7,050	35,250		
200 65																35,250
7500 10x2.33										1,298			1,298	30,197	30,197	
Flaked Tech 25 Kg OS Ptl	1,122	1,240	1,120	1,360	640		40						5,522	304,262		
Flaked Tech 25 Kg IS Ptl					200	1,930	2,105			1,180	1,215		6,830	365,313	689,575	
Diuron Col 248 Kg																
Diuron Col 224 Kg																
Butzone 7500 10x2.33										1,298	906		2,202	22,020	22,020	
CUSTOM MFG																
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Containers	Gals/Lbs	Total	
Acfluorfen-Days	15	28	21	30	31	30	31	31	30	31			278			
Prod 100% AJ lbs	86,014	143,900	151,181	151,628	169,884	265,983	238,245	60,518	147,635	83,049			1,507,737			
Mixed Acid	69,967												69,967	0.0464		
Perkloro D				44,840			48,560						93,500	0.0820		
Sulfuric Acid		22,885	18,170	22,310	29,440	28,830	32,470	7,220	23,390	12,823			197,638	0.1311	0.2400	
Nitric Acid		43,808	37,058	47,074	57,944	61,777	65,910	13,655	43,164	23,786			394,172	0.2814	0.2500	
Acetic Anhydride	52,070	123,855	106,704	120,842	169,510	184,249	171,683	35,620	112,220	69,759			1,118,382	0.7404	0.7200	
PCE		84,940											84,940	0.0630	0.1200	
50% Caustic	182,936	168,332	158,872	187,978	293,024	282,288	345,608	78,438	202,188	128,514			1,862,376	1.3015	1.2000	
Soda Ash													100	0.0001		
R118118	245,500	480,000	432,000	520,000	643,550	683,000	678,500	132,000	478,500	284,000			4,536,050	3.0079	3.5400	
BFG-Days					16	30	31	22					89			
Production						681,550	2,765,780	1,482,010					4,809,320			
CYMP-Days	4						31	31					68			
Prod 100% AJ	4,230						7,183	18,784					30,187			
DICNIL	7,330						22,710	21,622					51,562	0.0342		
IPA	10,670						17,450	18,896					47,116	0.0312		
50% Caustic	5,123						10,548	23,014					38,665	0.0267		
Catalyst	28						73	74					175	0.0001		
Hydroper	174						678	838					1,890	0.0011		
HCl	10												10	0.0000		
Dover Phos-Days		6	28	30	31	30							128			
Production			9,480	28,720	65,450	5,400							109,030			
Phenol		5,400	38,525	40,435	70,230	9,885							162,575	0.1078		
Caustic		20	140	180	340	50							710	0.0005		
TTP		7,800	75,532	84,421	112,910	18,085							278,748	0.1838		
PE		1,595	13,848	14,070	24,640	3,520							57,773	0.0383		
DCP		10,576	78,578	83,383	140,735	21,855							338,128	0.2228		
Xylene		50,850	88,880		7,365								155,295	0.1030		
Methanol		51,720					78,754						130,474	0.0865		
Phenol2																

CUSTOM MFG	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Containers	Gal/Lbs	Total
Ethephon-Days															
Prod 100% AI															
Ethylene Oxide															1 198
Phosphorus Trichloride															1 242
Anhydrous Hydr Chloride															0 850
Sulfuric Acid															
50% Caustic															1 189
FMC 6-Nitro-Days	31	28	31	30	10								130		
Prod 100% AI	21,781	18,705	28,822	34,017	2,916								108,241		
Step 3	127,863	69,421	166,148	168,104									551,538	5 1914	5 920
Step 4															1 033
Step 5															1 000
Calcium Chloride															
Chlorine	13,717	8,260	11,910	12,091									45,978	0 4328	0 170
Aluminum Sulfate	34,347	25,049	38,178	50,470	1,870								147,914	1 3922	1,530
G Acid	14,559	5,852	5,642	15,314									41,367	0 3894	0,900
50% Caustic	7,668	8,280	27,272	25,000	9,295								78,515	0 7380	1 920
20% Oleum	108,439	81,999	40,309	148,504	12,978								392,228	3 6918	5 160
Methanol	21,458	23,340	12,741	32,502	8,348								98,387	0 8281	4 880
Soda Ash	4,900	3,700	3,850	6,000	1,000								19,250	0 1812	0 180
Toluene	110,448	114,324	90,155	138,049	12,167								465,143	4 3782	4 570
83% Sulfuric Acid				61,200									61,200	0 5760	0 010
Mixed Acid	7,581	5,774	6,455	11,820	1,281								32,891	0 3098	0 410
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Containers	Gal/Lbs	
Sterol-Days									14	31			45		
Prod Kg									3,547	11,724			15,271		
Sterol									24,217	52,243			78,460	0 7197	
N-Propanol									63,691	143,150			206,841	1 9469	
Catalyst									164	874			1,028	0 0097	
Hydrogen										274			274	0 0026	

Process: Methylthiopinacolone Oxime (MTPO)

Basis: MTPO is manufactured under contract for export.

Raw Materials

Monochloropinacolone (MCP)
Sodium Hydroxide
Methyl Mercaptan
Hydroxylamine Sulfate
Methyl Alcohol
Sodium Hypochlorite

Process Description

Monochloropinacolone (MCP) is reacted with the sodium salt of methyl mercaptan to form methylthiopinacolone (MTP). MTP is further reacted to form Methylthiopinacolone Oxime.

Manufacturing Schedule

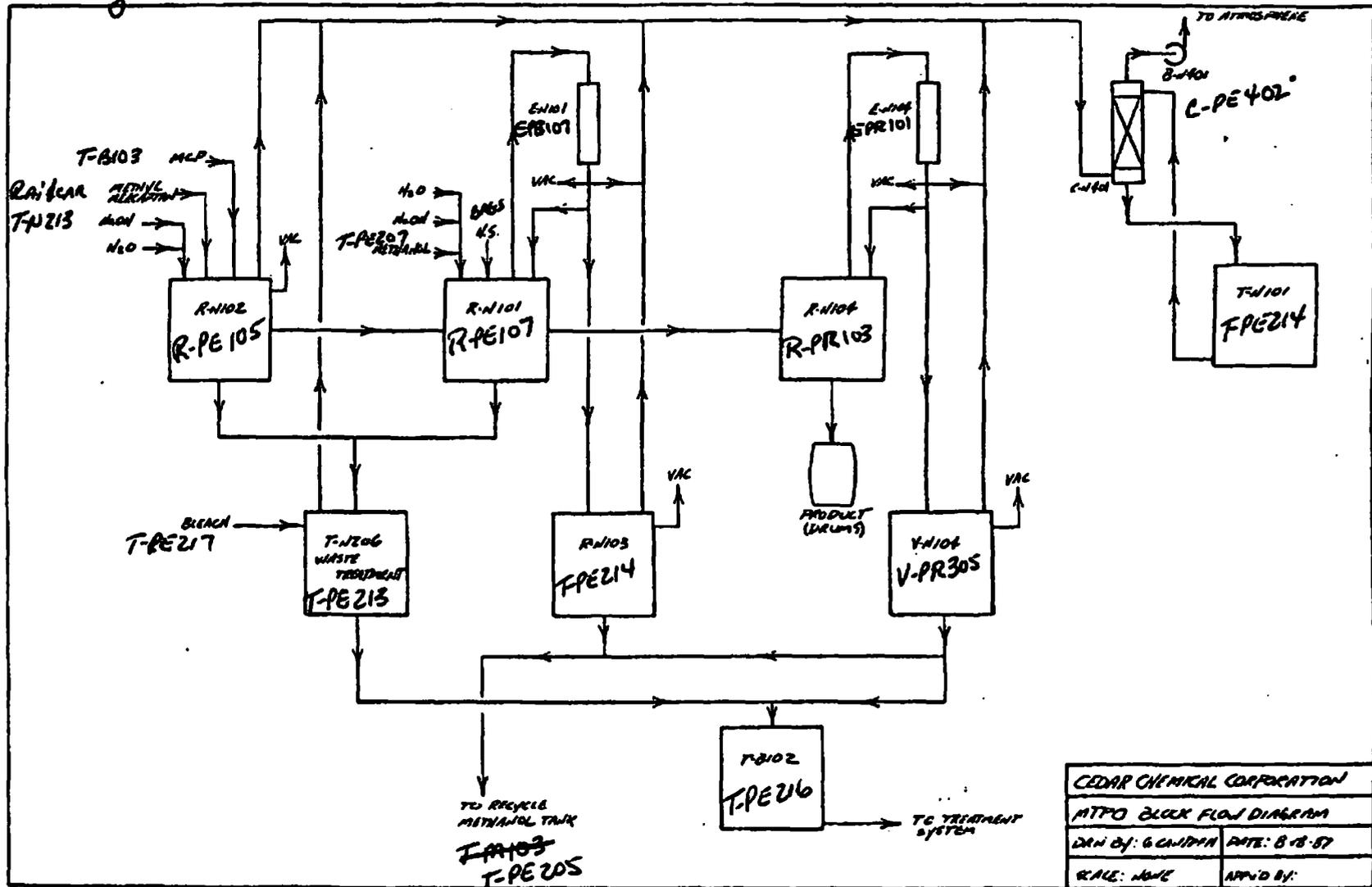
Production is at the request of the client company and availability of equipment. The product is usually produced for about two months per year and can be manufactured in either Unit 3 or Unit 4.

Process Considerations

Wastewater generated is treated within the confines of the process and then passed to the NPDES permitted, biological treatment system. The wastewater consists of aqueous, process waste and scrubber liquor.

Air emissions consists of methyl mercaptan which is vented at the end of the first reaction step. This sulfur compound is destroyed in a packed tower scrubbing system utilizing sodium hypochlorite. Fugitive emissions consist of methyl mercaptan and methyl alcohol.

MTPO
 - Changes for Unit 1 versus Unit 4



CEDAR CHEMICAL CORPORATION	
MTPO BLOCK FLOW DIAGRAM	
DRAWN BY: G. CANTINA	DATE: 8-18-87
SCALE: NONE	APPROVED BY:

MTPO 3 months 1986
 3 months 1987

Δ JE Porter 8/5/86

Unit ³ or Unit 4 : MeOH

Methyl Alcohol for MRPD Process

$$FW = 32.05$$

$$VP = 100 \text{ mm @ } 21.2 \text{ c}$$

$$\text{Tank diameter} = 10' \quad V = ~~1334~~ 1334 \text{ ft}^3 \approx 10,000 \text{ gallons}$$

$$\text{Height} = 17' \text{ fixed Roof} \quad \text{Avg Vapor space} = 8.5'$$

$$AT = 23 \text{ F}$$

$$C = 0.6 \text{ - for } 10' \text{ diameter tank}$$

$$\begin{aligned} \text{Breathing Loss} &= (2.21 \times 10^{-4}) \left(\frac{100}{760-100} \right)^{0.68} (10)^{1.73} (23)^{0.25} (0.6) (32.05) (8.5)^{0.51} \\ &= 0.90 \text{ lb/day} \end{aligned}$$

Working Loss:

At equilibrium with nitrogen pad

$$\frac{100}{760-100} = 0.15 \text{ mole MeOH / mole } N_2$$

$$\frac{(0.15)(32.05)}{28.02} = 0.17 \text{ lbs MeOH / lb } N_2$$

one tank volume per campaign - one campaign per year

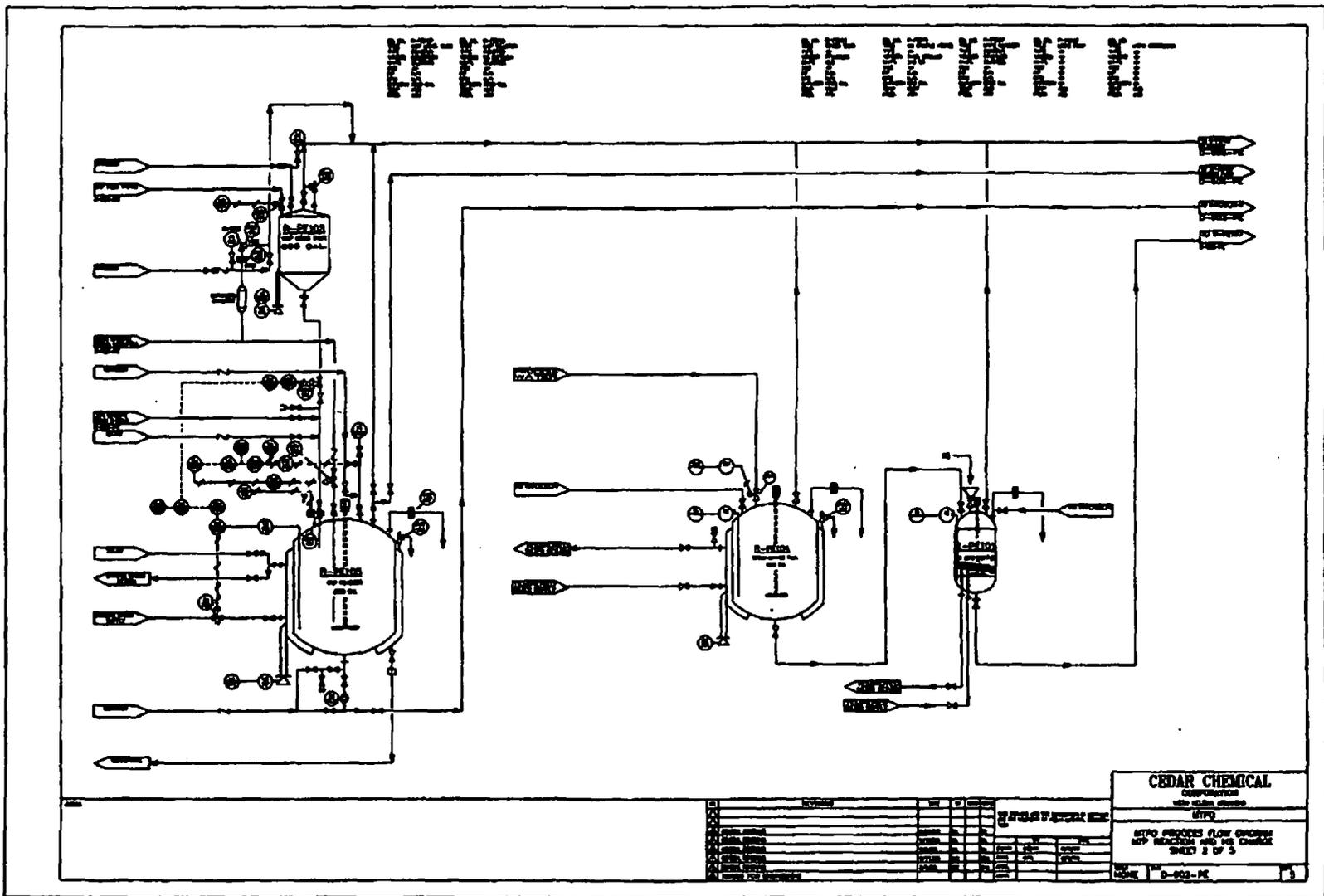
$$(1334 \text{ ft}^3) (0.0787 \text{ lb } N_2 / \text{ft}^3) = 104 \text{ lb } N_2$$

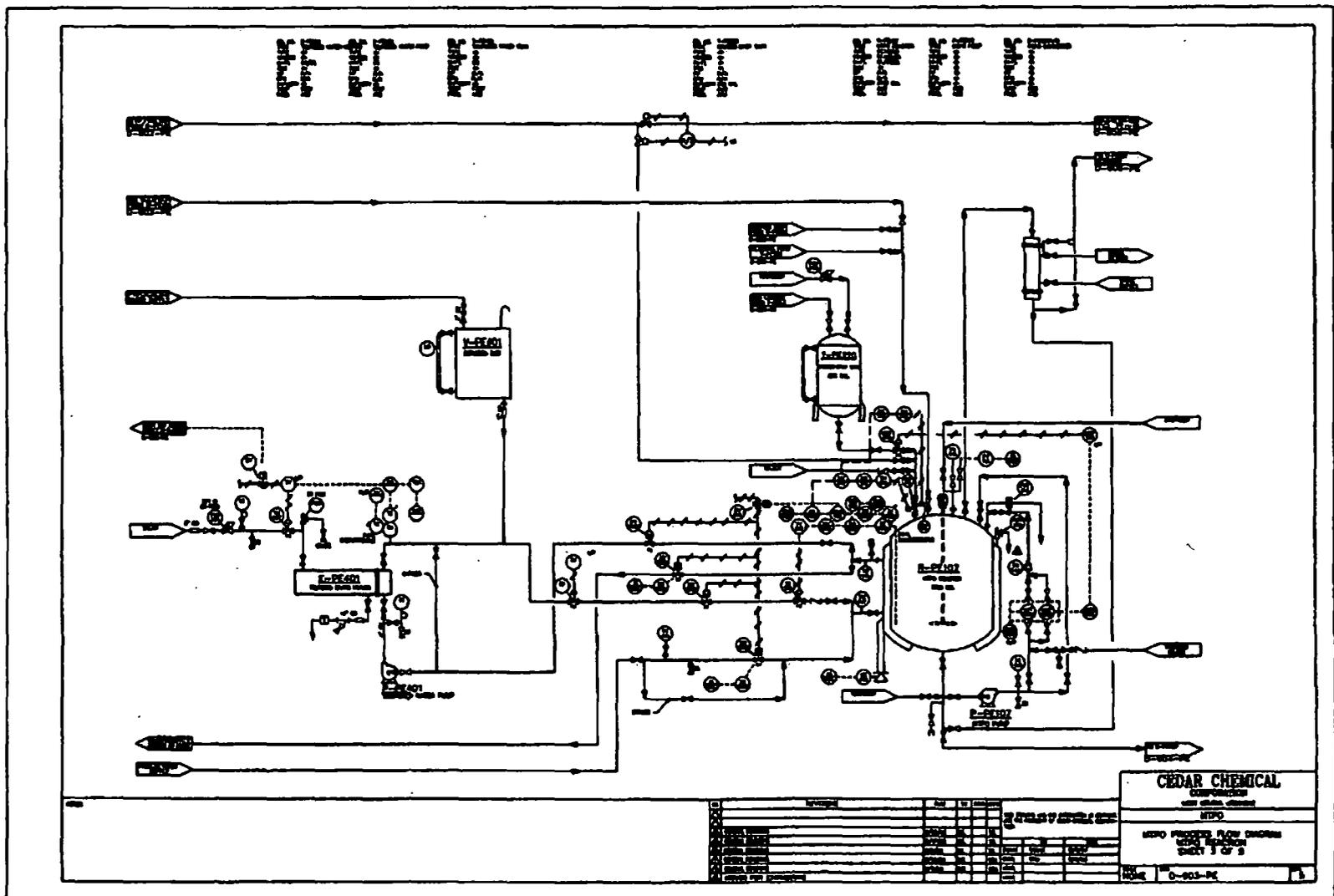
$$(104) (0.17) = 18 \text{ lbs MeOH}$$

$$\text{Annual Loss} = 18 \text{ lbs} = \text{Campaign loss}$$

$$\text{Daily Loss} = 0.3 \text{ lbs} \quad \text{Annual over 60 days}$$

$$\text{Monthly Loss} = 9 \text{ lbs} \quad 60 \text{ day campaign}$$

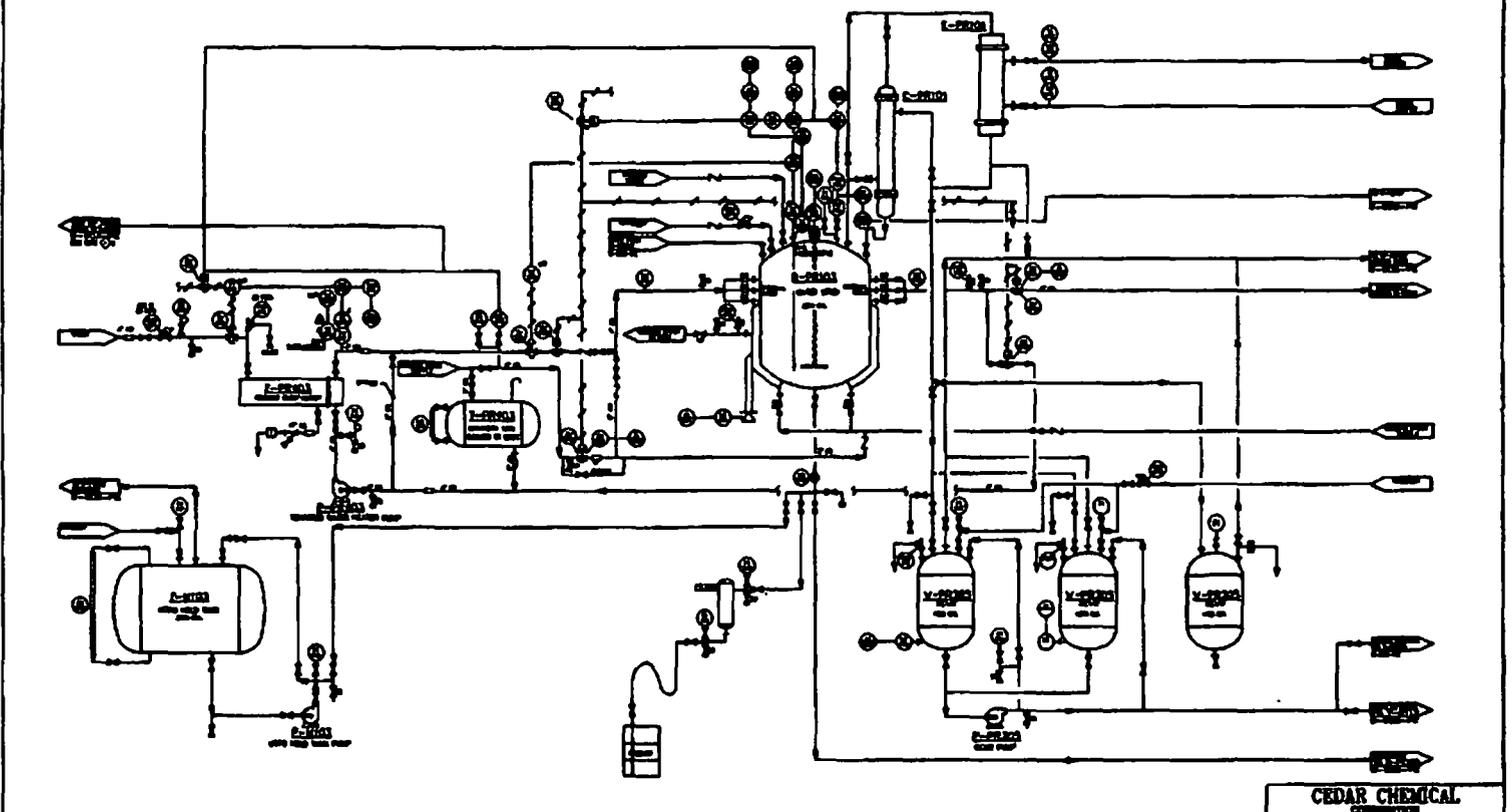




CEDAR CHEMICAL
 CORPORATION
 1000
 MPO
 MPO PROCESS FLOW DIAGRAM
 SHEET 1 OF 2
 6-203-PC

NO.	DESCRIPTION	UNIT	TYPE	SIZE	DATE	BY	CHKD.
1
2
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7
8
9
10

UNIT PROCESS

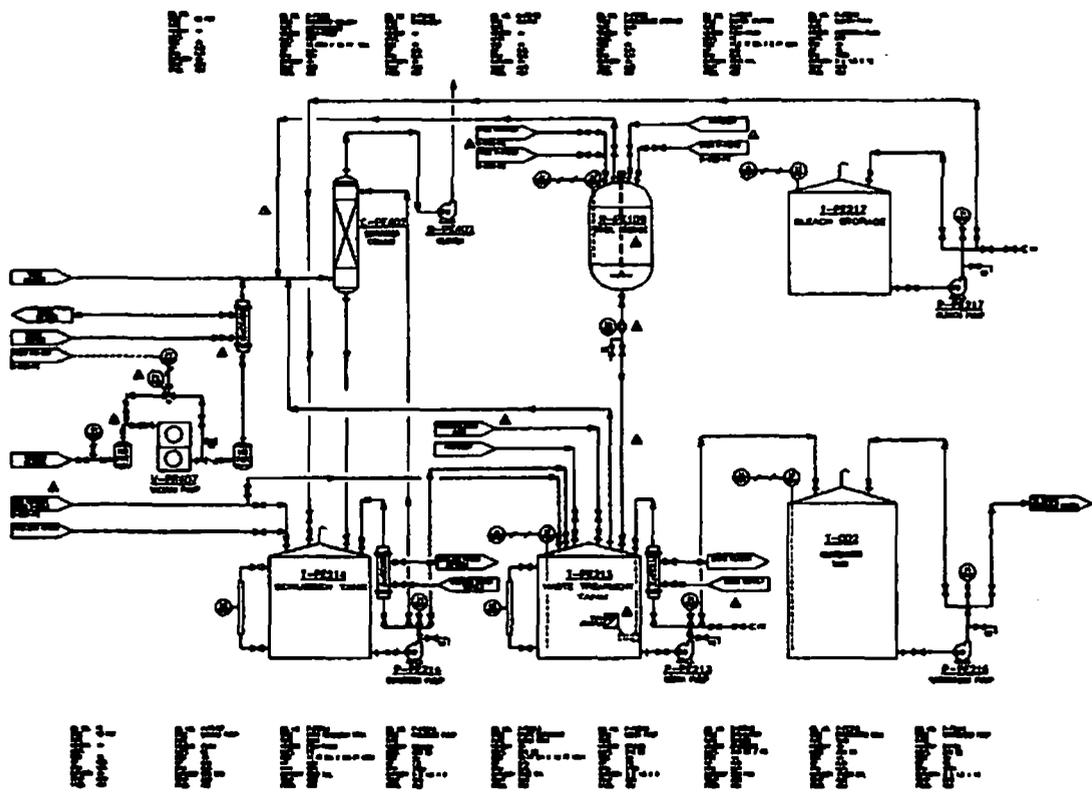


NO.	DESCRIPTION	DATE	BY	CHKD.
1	DESIGNED	11/15/54	J. W. H.	
2	REVISED	11/15/54	J. W. H.	
3	REVISED	11/15/54	J. W. H.	
4	REVISED	11/15/54	J. W. H.	
5	REVISED	11/15/54	J. W. H.	
6	REVISED	11/15/54	J. W. H.	
7	REVISED	11/15/54	J. W. H.	
8	REVISED	11/15/54	J. W. H.	
9	REVISED	11/15/54	J. W. H.	
10	REVISED	11/15/54	J. W. H.	

CEDAR CHEMICAL
 COMPANY
 NEW BRUNSWICK, N.J.

UNIT PROCESS FLOW DIAGRAM
 NO. 1000-1-1000
 SHEET 1 OF 3

DATE: 11-15-54



NO.	SYMBOL	SIZE	TYPE	REMARKS
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CEDAR CHEMICAL
 CORPORATION
 WEST ALBANY, ALABAMA
 NTPD
 NTPD PROCESS FLOW DIAGRAM
 UNIT 2, UNIT 1, UNIT 2
 SHEET 5 OF 5
 DATE 11-20-74



VERTAC CHEMICAL CORPORATION
24th Floor • 5100 Poplar • Memphis, TN 38137 • 901-767-8851

REPLY TO: P. O. BOX 2648
WEST HELENA, AR 72360
(501) 872-3701

November 4, 1985

Mr. John Ward
Arkansas Department of Pollution Control and Ecology
8001 National Drive--P.O. Box 9583
Little Rock, AR 72209

Dear Sir:

1. From late 1976 through 1978 we produced a carbamate insecticide for Diamond-Shamrock. This was a very successful campaign for Vertac Chemical but was not continued due to US Registrations. Rhone-Poulenc currently owns the process and has contracted with Vertac Chemical to manufacture an intermediate product, stopping short of the final carbamation step.
2. Our production will begin approximately December 15, 1985 and will continue for about 30 days. Our schedule calls for 55 metric tons of MTPO to be shipped as an intermediate for manufacturing use only. Production is estimated to be complete within 30 days.
3. The process begins with monochloropinacolone (MCP) being reacted with methyl mercaptide to form methylthiopinacolone (MTP). The first reaction's product, MTP, is the reacted with hydroxylamine sulfate to form methylthiopinacolone oxime (MTPO).
4. Environmental considerations include the following areas:

Water--Two aqueous reaction phases and a scrubber liquor will be generated. One of the phases will be treated with hypochlorite to remove remaining mercaptide. All of the liquid waste will then be treated in our biological treatment system. Our past experience has demonstrated this to be acceptable and will not affect our current NPDES parameters.

Air--The first process step involves the use of methyl mercaptan in a pressurized reaction. When complete a small excess of reactant is vented to a hypochlorite scrubber. Past operating experience has demonstrated this step to be quantitative. The result being that no air contaminants are emitted.

The remaining process step has no air emissions. Vacuum systems and storage tanks will be vented to the scrubber system and/or carbon-containing drums. These will be used at final atmospheric vent points to trap fugitive odors/emissions.

Mr. John Ward
November 4, 1985
Page two

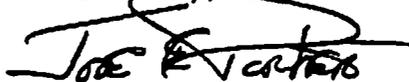
Hazardous Waste--The MTPO process does not generate any wastes which are specifically listed as hazardous. The aqueous phase of the first process step could be indentified as reactive due to its mercaptan content. However, the waste will be treated in-process with hypochlorite such that mercaptan is converted to non-hazardous sulfate. The aqueous phase will then be biologically treated.

The final process step generates a 60 to 70 percent methyl alcohol waste which will be distilled and recycled back to the process. The aqueous phase and any residual alcohol will be sent to our biological treatment system.

Scrubber liquor, a non-hazardous material, will be mixed with other aqueous wastes and sent to the biological treatment system also. There are no other wastes generated which could considered to be hazardous by characteristic.

Process equipment, storage tanks, and environmental control equipment will be the same as that used in the 1976 production. Since this process equipment has been previously permitted and no increases in emissions are currently forseen, we do not anticipate formal modification to our operating permits. If the department has any questions, please call us.

Sincerely,



Joe E. Porter
Environmental Engineer

CC: J.W. Shackelford
J.H. Miles

JEP:rf

Process: Methylthiopinacolone Oxime (MTPO)

Basis: MTPO is manufactured under contract for export.

Raw Materials

Monochloropinacolone (MCP)
Sodium Hydroxide
Methyl Mercaptan
Hydroxylamine Sulfate
Methyl Alcohol
Sodium Hypochlorite

Process Description

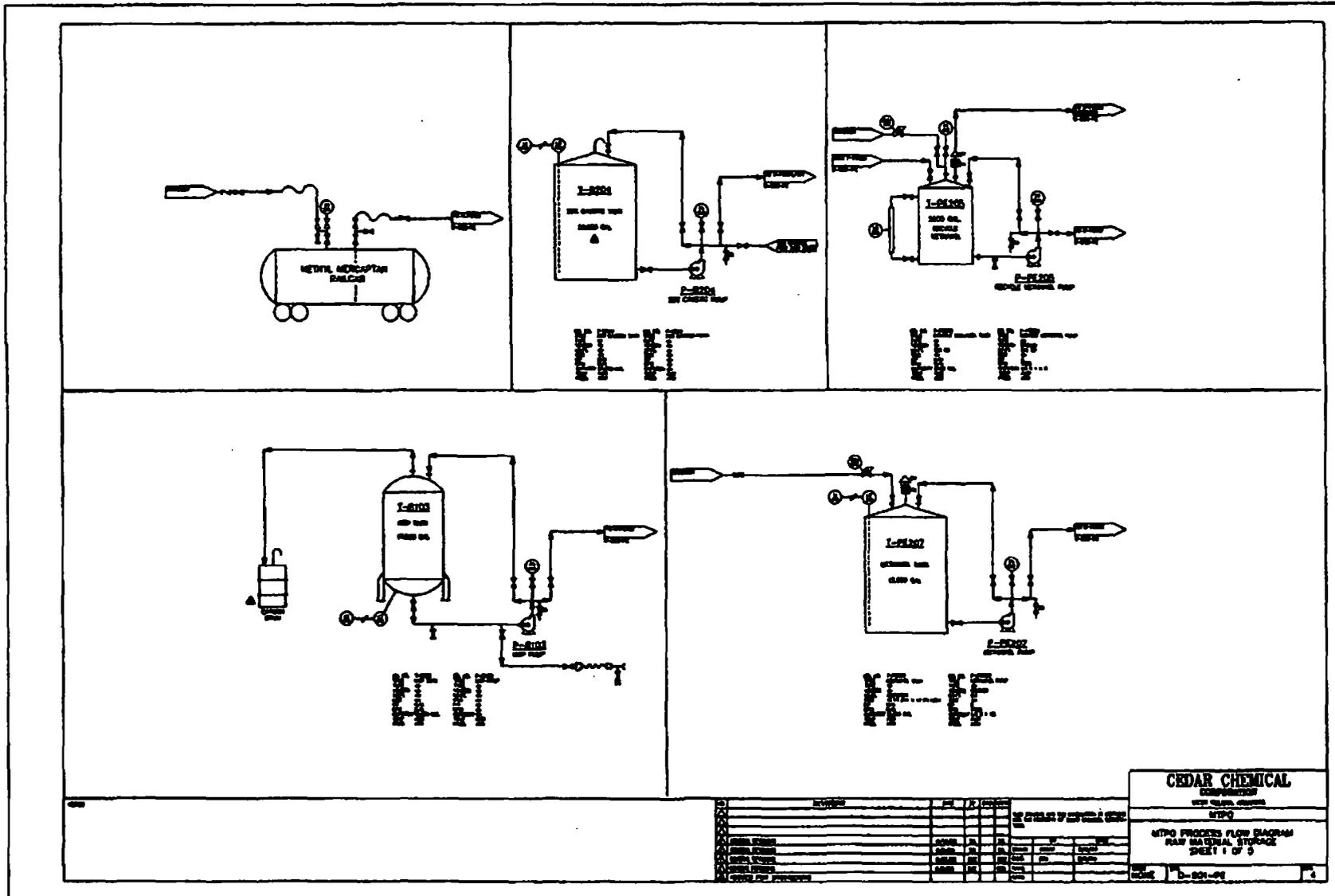
Monochloropinacolone (MCP) is reacted with the sodium salt of methyl mercaptan to form methylthiopinacolone (MTP). MTP is further reacted to form Methylthiopinacolone Oxime.

Manufacturing Schedule

Production is at the request of the client company and availability of equipment. The product is usually produced for about two months per year and can be manufactured in either Unit 3 or Unit 4.

Process Considerations

Wastewater generated is treated within the confines of the process and then passed to the NPDES permitted, biological treatment system. The wastewater consists of aqueous, process waste and scrubber liquor. Air emissions consists of methyl mercaptan which is vented at the end of the first reaction step. This sulfur compound is destroyed in a packed tower scrubbing system utilizing sodium hypochlorite. Fugitive emissions consist of methyl mercaptan and methyl alcohol.



CEDAR CHEMICAL

COMPANION

NEW YORK, NEW YORK

MTPO

MTPO PROCESS FLOW DIAGRAM

RAW MATERIAL STORAGE

SHEET 1 OF 3

DATE 12-20-54

NO.	DESCRIPTION	DATE	BY	REVISION
1	AS SHOWN BY ORIGINAL DESIG.			
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Unit 3 or Unit 4 : MeOH

Methyl Alcohol for MPO Process

$$FW = 32.05$$

$$VP = 100 \text{ mm @ } 21.22$$

$$\text{Tank diameter} = 10' \quad V = ~~2500~~ 1334 \text{ ft}^3 \approx 10,000 \text{ gallons}$$

$$\text{Height} = 17' \text{ fixed Roof} \quad \text{Avg Vapor space} = 8.5'$$

$$AT = 23^\circ\text{F}$$

$$C = 0.6 \text{ ~ for } 10' \text{ diameter tank}$$

$$\begin{aligned} \text{Breathing Loss} &= (2.21 \times 10^{-4}) \left(\frac{100}{760-100} \right)^{0.68} (10)^{1.73} (23)^{0.5} (0.6) (32.05) (8.5)^{0.51} \\ &= 0.90 \text{ lb/day} \end{aligned}$$

Working Loss:

At equilibrium with nitrogen pad

$$\frac{100}{760-100} = 0.15 \text{ mole MeOH / mole } N_2$$

$$\frac{(0.15)(32.05)}{28.02} = 0.17 \text{ lbs MeOH / lb } N_2$$

one tank volume per campaign - one campaign per year

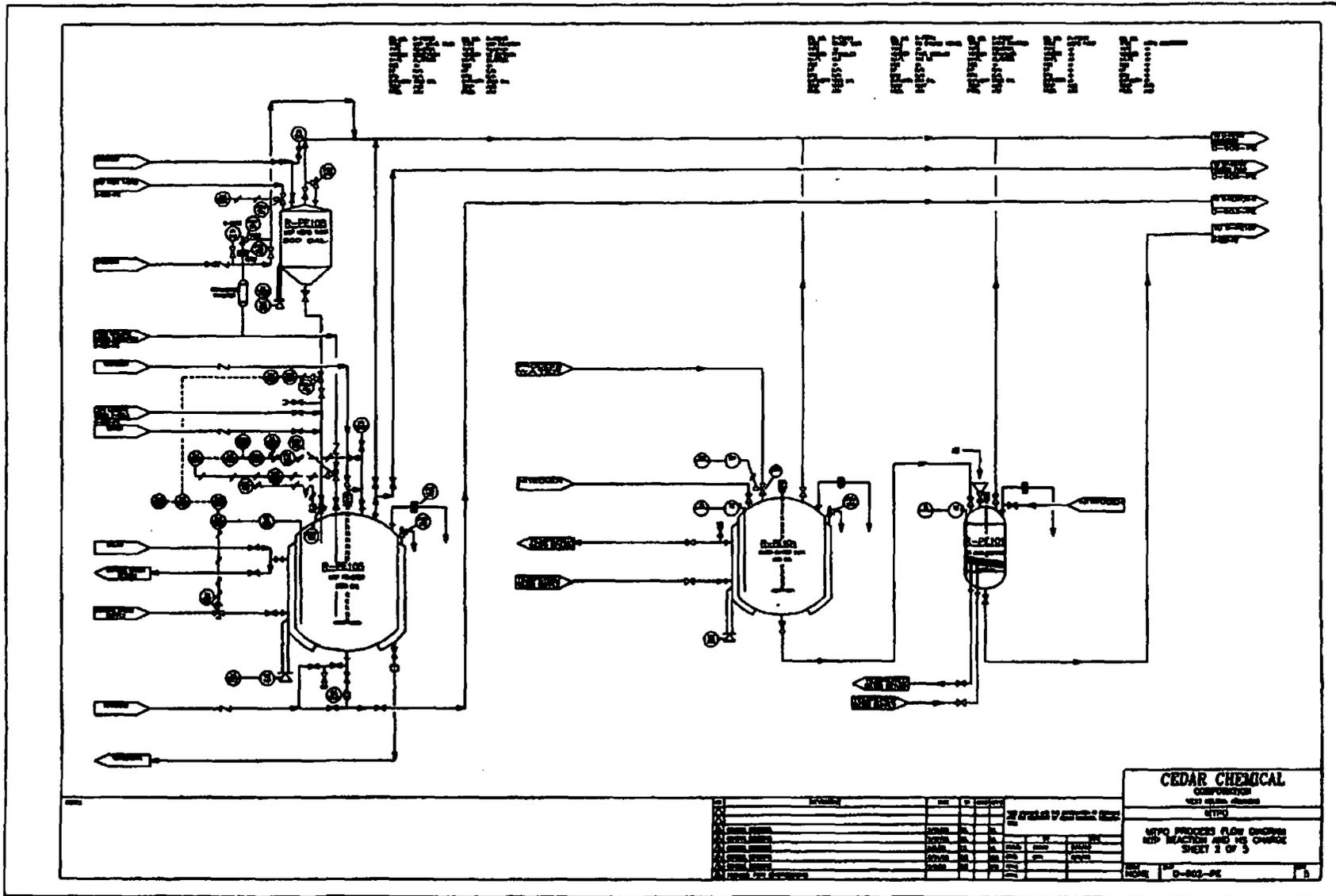
$$(1334 \text{ ft}^3) (0.0787 \text{ lb } N_2/\text{ft}^3) = 104 \text{ lb } N_2$$

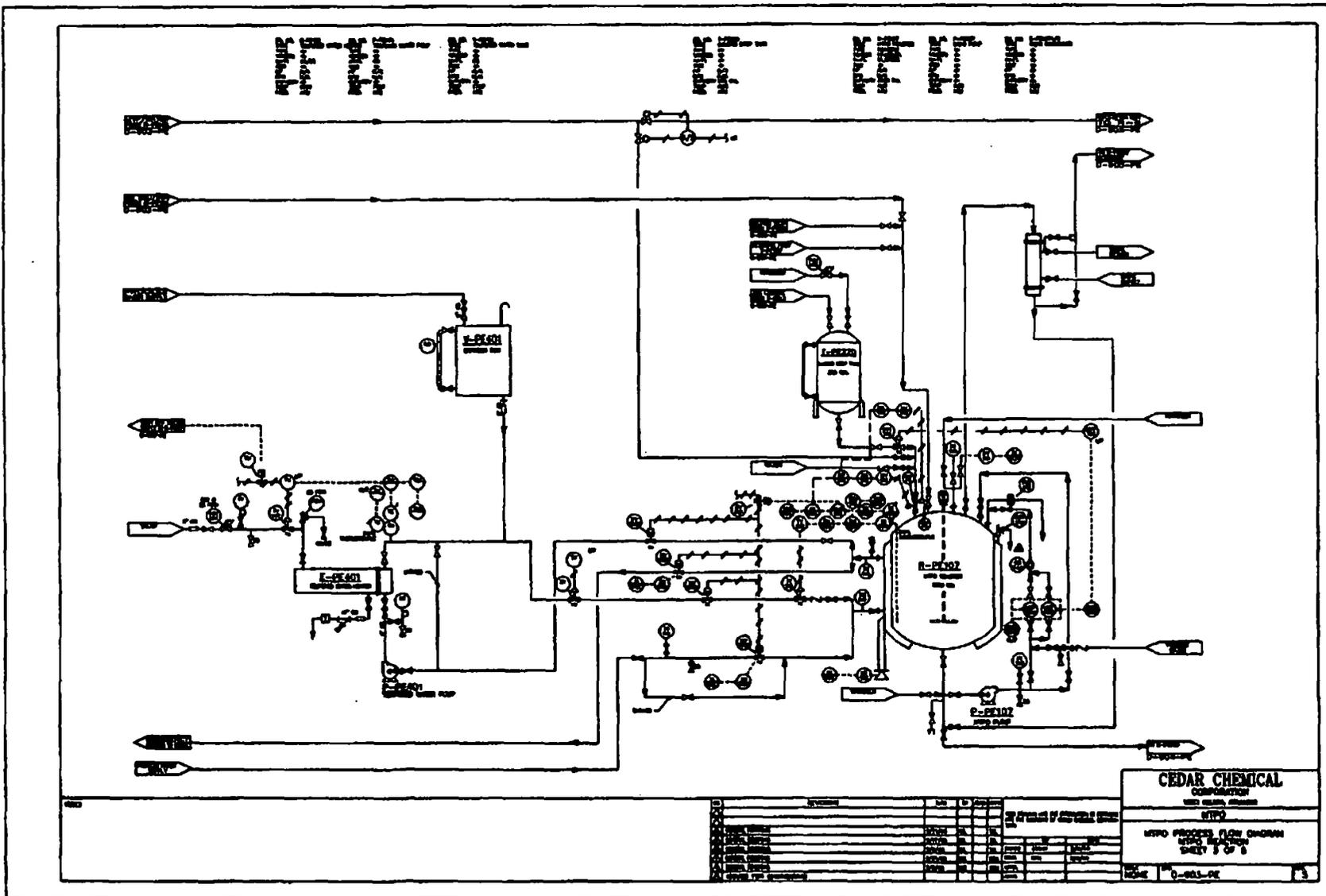
$$(104) (0.17) = 18 \text{ lbs MeOH}$$

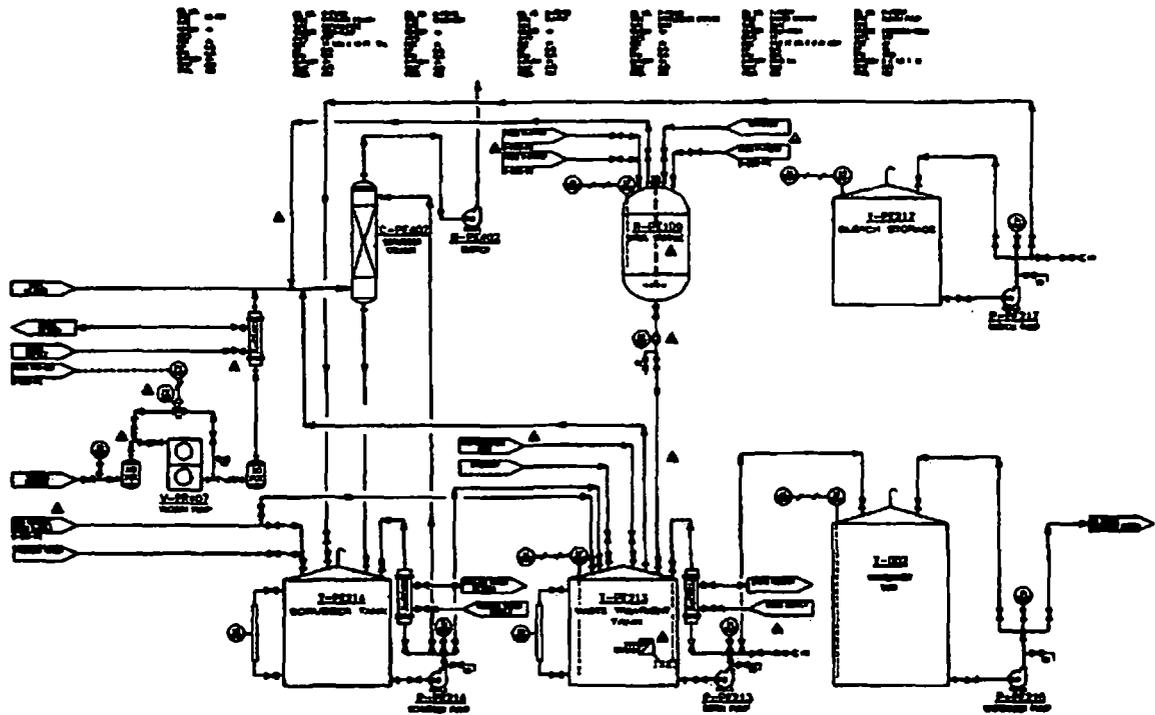
$$\text{Annual Loss} = 18 \text{ lbs} = \text{Campaign loss}$$

$$\text{Daily Loss} = 0.3 \text{ lbs} \quad \text{Annual over 60 days}$$

$$\text{Monthly Loss} = 9 \text{ lbs} \quad 60 \text{ day campaign}$$







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CEDAR CHEMICAL
 CORPORATION
 1000 W. 10th Street
 MTPD
 MTPD PROCESS FLOW DIAGRAM
 UNIT 1, TREATING PLANT
 SHEET 3 OF 3
 1-1000-PE

NO	DESCRIPTION	UNIT	QTY	DATE	BY	REVISION
1	DESIGNED					
2	CHECKED					
3	APPROVED					
4	ISSUED					



VERTAC CHEMICAL CORPORATION

24th Floor • 5100 Poplar • Memphis, TN 38137 • 901-767-6851

REPLY TO: P. O. BOX 2648
WEST HELENA, AR 72390
(501) 572-3701

November 4, 1985

Mr. John Ward
Arkansas Department of Pollution Control and Ecology
8001 National Drive--P.O. Box 9583
Little Rock, AR 72209

Dear Sir:

1. From late 1976 through 1978 we produced a carbamate insecticide for Diamond-Shamrock. This was a very successful campaign for Vertac Chemical but was not continued due to US Registrations. Rhone-Poulenc currently owns the process and has contracted with Vertac Chemical to manufacture an intermediate product, stopping short of the final carbamation step.
2. Our production will begin approximately December 15, 1985 and will continue for about 30 days. Our schedule calls for 55 metric tons of MTPO to be shipped as an intermediate for manufacturing use only. Production is estimated to be complete within 30 days.
3. The process begins with monochloropinacolone (MCP) being reacted with methyl mercaptide to form methylthiopinacolone (MTP). The first reaction's product, MTP, is then reacted with hydroxylamine sulfate to form methylthiopinacolone oxime (MTPO).
4. Environmental considerations include the following areas:

Water--Two aqueous reaction phases and a scrubber liquor will be generated. One of the phases will be treated with hypochlorite to remove remaining mercaptide. All of the liquid waste will then be treated in our biological treatment system. Our past experience has demonstrated this to be acceptable and will not affect our current NPDES parameters.

Air--The first process step involves the use of methyl mercaptan in a pressurized reaction. When complete a small excess of reactant is vented to a hypochlorite scrubber. Past operating experience has demonstrated this step to be quantitative. The result being that no air contaminants are emitted.

The remaining process step has no air emissions. Vacuum systems and storage tanks will be vented to the scrubber system and/or carbon-containing drums. These will be used at final atmospheric vent points to trap fugitive odors/emissions.

ABO000068108

Mr. John Ward
November 4, 1985
Page two

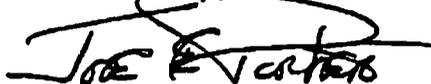
Hazardous Waste--The MTPO process does not generate any wastes which are specifically listed as hazardous. The aqueous phase of the first process step could be identified as reactive due to its mercaptan content. However, the waste will be treated in-process with hypochlorite such that mercaptan is converted to non-hazardous sulfate. The aqueous phase will then be biologically treated.

The final process step generates a 60 to 70 percent methyl alcohol waste which will be distilled and recycled back to the process. The aqueous phase and any residual alcohol will be sent to our biological treatment system.

Scrubber liquor, a non-hazardous material, will be mixed with other aqueous wastes and sent to the biological treatment system also. There are no other wastes generated which could be considered to be hazardous by characteristic.

Process equipment, storage tanks, and environmental control equipment will be the same as that used in the 1976 production. Since this process equipment has been previously permitted and no increases in emissions are currently foreseen, we do not anticipate formal modification to our operating permits. If the department has any questions, please call us.

Sincerely,



Joe E. Porter
Environmental Engineer

CC: J.W. Shackelford
J.H. Miles

JEP:rf

Rhone Poulenc Project

Client: The Agricultural Division of Rhone Poulenc U.S.A.

Project: To modify the Propanil Plant to produce an intermediate in the four step "Tackle" process. Subsequent two steps to be completed by RP's Texas and Tennessee plants respectively.

To modify the Lannate plant to complete the final processing step to technical Tackle.

Process: Step 1- (RP-15); potassium cresylate is formed from metacresol and KOH, and coupled with 3,4 - dichlorobenzotrifluoride, in DMAC solvent. The DMAC is stripped and recycled and the product water washed. Step 4 - (RP-15) RP-2 an intermediate from R-P is nitrated with mixed sulfuric/nitric acids in EDC solvent. The EDC is stripped and recycled and water substituted as solvent after forming the sodium salt of Tackle with NaOH.

Capital:	Initial estimate	\$ 75M	RP-15
		\$ 425M	RP-10
	Final expenditures:	\$ 254M	RP-15 due to scope
		\$1,146M	RP-10 changes

Raw Materials: Provided by R-P

Waste: Paid by Cedar and invoiced to R-P with 15 day terms. On RP-10 Cedar eventually was able to treat onsite and charged R-P \$.08/lb RP-10.

Contract: RP-15

- a. \$435M processing fee for three months.
- b. Incremental production over targeted 684M lbs. charged at \$0.35/lb.
- c. Additional production time prorated based on \$175M/month.
- d. \$75M capital fee.

RP-10

- a. \$550M processing fee for three months.
- b. Incremental production over targeted 600M lbs charged at \$0.35/lb.
- c. Additional production time prorated based on \$200M/month.

d. \$425M capital fee.

	Three Year Option	
RP Finally Paid	Processing	Capital
RP-15	\$ 576M	\$195M
RP-10	<u>756M</u>	<u>525M</u>
	\$ 1332M	\$720M

Rhone Poulenc RPA 90946 (Cyclanilide)

Heat & Mass Balance

Please fill

R.P. Basis 0.53 gallons (2 L)
 Cedar Basis 3,000.00 gallons
 Straight Line Multiplier 5,679.35

CONFIDENTIAL

Assumptions:

1. Process overall 80% O.S.T.
2. 1.0% Material Loss through centrifugation
3. 0.5% Material Loss through drying
4. Centrifugation C/T=45 minutes @ 200 lb./plow

Selling Price

\$ 5.43 per lb. to make \$10k/day

		COUPLING REACTION				HYDROLYSIS REACTION			ACIDIFICATION			
Stream No.		1	2	3	4	5	6	7	8	9	10	11
Description		Initial Charge	Na Methylate Sol'n	Azeo Distillat'n	CPDM Charge	Rxn Generat'd MeOH	Coupling Product	Water Charge	MeOH Distillat'n	Hydroly's Product	H ₂ SO ₄ Charge	Wet Final Product
Component	MW											
Raw Materials												
CPDM	158.10				1,970.8							
2,4 DCA	162.00	2,040.9										
NaOCH ₃	54.00		741.1									
MeOH	32.00		1,729.3	1,729.3								
H ₂ O	18.00							143.6			10.4	
H ₂ SO ₄	98.00										250.2	
Toluene	92.15	17,191.1		4,034.9								
(By) Products												
Na-CPMPA	310.10						2,473.9					
MeOH	32.00					797.8			398.9			
Na-RPA 90946	296.10									1,511.8		
RPA 90946	274.10											1,399.5
Na ₂ SO ₄	142.00										362.5	
Salts												
Others												
Total		19,232.0	2,470.4	5,764.2	1,970.8	797.8	2,473.9	143.6	398.9	1,511.8	623.1	1,399.5
Stream Weight (lb/batch)												
Stream Volume (gal)												
Temperature (°F)												
Pressure (psia, [torr])												
S.G.												
Cycle Time (hr)							12.0			5.0		1.0

"Front End"
Time Cycle

18.0

Rhone Poulenc RPA 90946 (C)
Heat & Mass Balance

R.P. Basis 0.53
 Cedar Basis 3,000.00
 Straight Line Multiplier 5,679.35

Assumptions:

1. Process overall 80% O.S.T.
2. 1.0% Material Loss through centrifugation
3. 0.5% Material Loss through drying
4. Centrifugation C/T=45 minutes @ 2

ISOLATION & DRYING

Stream No.		12	13	14	15	16	17	18	19	20	21
Description		From Centrifug'n	Vent from Dryer	Dried Final Product	Totals						
Component	MW										
Raw Materials											
CPDM	158.10				1,970.8						
2,4 DCA	162.00				2,040.9						
NaOCH3	54.00				741.1						
MeOH	32.00				3,458.5						
H2O	18.00	154.0	151.3	2.8	459.3						
H2SO4	98.00				250.2						
Toluene	92.15										
(By) Products											
Na-CPMPA	310.10				2,473.9						
MeOH	32.00				1,196.7						
Na-RPA 90946	296.10				1,511.8						
RPA 90946	274.10	1,385.5		1,378.6							
Na2SO4	142.00				362.5						
Salts	---										
Others	---										
Total		1,539.5	151.3	1,381.3							
Stream Weight (lb/batch)											
Stream Volume (gal)											
Temperature (°F)											
Pressure (psia, [torr])											
S.G.											
Cycle Time (hr)		5.2	12.0		35.2						

"Back End"
Time Cycle 17.2

Rhone Poulenc RPA 90946 (Cyclanilide)

Heat & Mass Balance

R.P. Basis 0.53 gallons (2 L)
 Cedar Basis 4,000.00 gallons
 Straight Line Multiplier 7,572.47

CONFIDENTIAL

Assumptions:

1. Process overall 80% O.S.T.
2. 1.0% Material Loss through centrifugation
3. 0.5% Material Loss through drying
4. Centrifugation C/T=45 minutes @ 200 lb./plow

Selling Price

\$ 4.07 per lb. to make \$10k/day

Stream No.	Description	COUPLING REACTION				HYDROLYSIS REACTION			ACIDIFICATION			
		1	2	3	4	5	6	7	8	9	10	11
		Initial Charge	Na Methylate Sol'n	Azeo Distillat'n	CPDM Charge	Rxn Generat'd MeOH	Coupling Product	Water Charge	MeOH Distillat'n	Hydroly's Product	H ₂ SO ₄ Charge	Wet Final Product
Component	MW											
Raw Materials												
CPDM	158.10				2,627.7							
2,4 DCA	162.00	2,721.2										
NaOCH ₃	54.00		988.1									
MeOH	32.00		2,305.7	2,305.7								
H ₂ O	18.00							191.5				13.9
H ₂ SO ₄	98.00											333.6
Toluene	92.15	22,921.5		5,379.9								
(By) Products												
Na-CPMPA	310.10							3,298.6				
MeOH	32.00					1,063.7			531.9			
Na-RPA 90946	296.10									2,015.8		
RPA 90946	274.10											1,866.0
Na ₂ SO ₄	142.00										483.4	
Salts	---											
Others	---											
Total		25,642.7	3,293.8	7,685.6	2,627.7	1,063.7	3,298.6	191.5	531.9	2,015.8	830.8	1,866.0
Stream Weight (lb/batch)												
Stream Volume (gal)												
Temperature (°F)												
Pressure (psia, [torr])												
S.G.												
Cycle Time (hr)								12.0			5.0	1.0

"Front End"
Time Cycle

18.0

Rhene Poulenc RPA 90946 (C)

Heat & Mass Balance

R.P. Basis 0.53
 Cedar Basis 4,000.00
 Straight Line Multiplier 7,572.47

Assumptions:

1. Process overall 80% O.S.T.
2. 1.0% Material Loss through centrifugation
3. 0.5% Material Loss through drying
4. Centrifugation C/T=45 minutes @ 2

ISOLATION & DRYING

Stream No.		12	13	14	15	16	17	18	19	20	21
Description		From Centrifug'n	Vent from Dryer	Dried Final Product	Totals						
Component	MW										
Raw Materials											
CPDM	158.10				2,627.7						
2,4 DCA	162.00				2,721.2						
NaOCH3	54.00				988.1						
MeOH	32.00				4,611.3						
H2O	18.00	205.4	201.7	3.7	612.4						
H2SO4	98.00				333.6						
Toluene	92.15										
(By) Products											
Na-CPMPA	310.10				3,298.6						
MeOH	32.00				1,595.6						
Na-RPA 90946	296.10				2,015.8						
RPA 90946	274.10	1,847.3		1,838.1							
Na2SO4	142.00				483.4						
Salts	---										
Others	---										
Total		2,052.7	201.7	1,841.8							
Stream Weight (lb/batch)											
Stream Volume (gal)											
Temperature (°F)											
Pressure (psia, [torr])											
S.G.											
Cycle Time (hr)		7.0	12.0		37.0						

"Back End"
Time Cycle 19.0

To Neil

Date _____ Time _____

WHILE YOU WERE OUT

M Johnny Hanna

of _____

Phone _____

Area Code	Number	Extension
TELEPHONED	PLEASE CALL	
CALLED TO SEE YOU	WILL CALL AGAIN	
WANTS TO SEE YOU	URGENT	
RETURNED YOUR CALL		

Message _____

cust. # Rhone - Paulone

for inv. purposes is

735000

C 3625-4300

Operator _____



AMPAD
EFFICIENCY®

23-000 60 SHT. PAD
23-001 250 SHT. DISPENSER BOX

25 97

SECRECY AGREEMENT

THIS AGREEMENT, made this 8th day of August, 1980, by and between RHONE-POULENC INC., a New York State corporation, having its principal place of business at Black Horse Lane, Monmouth Junction, New Jersey 08852, (hereinafter referred to as "RP INC.") and VERTAC CHEMICAL CORPORATION, a Delaware corporation, having its principal place of business at 5100 Poplar Avenue, Memphis, Tennessee 38137, (hereinafter referred to as "VERTAC").

WHEREAS, RP INC. desires to enter into negotiations with VERTAC leading to the possible acquisition by RP INC. of part or all of the assets of VERTAC; and

WHEREAS, VERTAC possesses technical information, know-how and other trade secrets which RP INC. desires to review in connection with its acquisition study; and

WHEREAS, VERTAC wishes to disclose such information to RP INC. as a basis for negotiations leading to a possible agreement between the parties.

NOW, THEREFORE, the parties agree as follows:

1. The technical information, know-how and trade secrets disclosed by VERTAC to RP INC. hereunder and designated by VERTAC in writing to be confidential shall, for a period of ten (10) years from the date of this Agreement, be kept strictly confidential by

RP INC. and will not be duplicated, except for limited internal circulation, or disclosed to other parties, or used without prior written approval of VERTAC, except that such information may be disclosed to such employees of RP INC. as reasonably require the same for the aforesaid purposes; and provided further that RP INC. shall take the same reasonable precautions against disclosure to other parties that RP INC. uses with respect to its own information of a similar nature. Information disclosed orally will be considered non-confidential unless within thirty (30) days after such oral disclosure a written disclosure is submitted to RP INC. containing the information which was orally disclosed, and confirming the confidential nature of such information.

2. The obligations set forth in paragraph 1 hereof shall not apply to:

- (a) information which is now or later becomes publicly known through no fault of RP INC.;
- (b) information which RP INC. obtains from a third party entitled to disclose it;
- (c) information which was already known to RP INC. at the time of its disclosure hereunder, as supported by prior written records.

3. RP INC. agrees to return, at VERTAC's request, all documents furnished by VERTAC pursuant to this Agreement and not to retain copies or other records of the information contained therein; provided,

however, that RP INC. may place, under seal, one copy of such documents and records, under the custody of its General Counsel, to be opened only in the event that a claim for breach of this Agreement should be asserted against RP INC. on behalf of VERTAC, and provided further that RP INC. shall continue to be bound by the prohibitions and precautions regarding disclosure and use of such records and documents set forth herein.

4. Nothing contained in this Agreement shall be deemed to grant RP INC. a license to use any confidential information disclosed to it hereunder.

IN WITNESS WHEREOF, the parties have executed this Agreement as of the day and year first above written.

VERTAC CHEMICAL CORPORATION

RHONE-POULENC INC.

By:  _____

By:  _____
Jean-Paul Marx
Vice President - Finance
and Administration



INTERNAL CORRESPONDENCE

DATE: August 7, 1980

TO E. A. Munoz

FROM: J. J. O'Neill

CC: R. A. Guidi
C. P. Bomar

SUBJECT:

J. Sibeud called to say that they have signed the Secrecy Agreement and would like to send two engineers here next week. They have designated Paul Boisde and Steve Pelznen *PELTZMAN* and their plan is to proceed to fly to Jackson Monday afternoon and proceed to Vicksburg. They have asked specifically that if at all possible that they be met by Mr. Guidi and that he lay out the work schedule with them for the examination of Vicksburg and West Helena.

I told Sibeud that we would make every effort to have Ray available and that during the course of their visit I would expect that Ray may have Pat Bomar share with him the responsibility for getting the data that they need.



J. J. O'Neill

JJO'Neill

ADEQ0017699

8-6-80

Televised
Security Agent
from to
be succeed

OK



VERTAC CHEMICAL CORPORATION
24th Floor • 5100 Poplar • Memphis, TN 38137 • 901-767-6851

TELEX 53927

August 1, 1980

Mr. J. P. Marx
Agricultural Division
Rhone Poulenc, Inc.
P. O. Box 125
Monmouth Junction, New Jersey 08852

Dear Mr. Marx:

Mr. O'Neill has asked that the enclosed copy of the Vertac Chemical Corporation Financial Statements as of December 31, 1979, be forwarded to you.

Sincerely yours,

(Miss) Anne Pekovich
Secretary to John J. O'Neill

ap

Enclosure

ADEQ0017699



INTERNAL CORRESPONDENCE

DATE: August 18, 1980

TO: C. P. Bomar
J. C. Bumpers
R. A. Guidi
~~XXXXXXXXXXXX~~
G. F. Mather
E. A. Munoz
J. J. O'Neill

FROM: L. E. Harcrow

cc:

SUBJECT: Information Furnished
to Rhone-Poulenc, Inc.

Attached is a list of information furnished to Rhone-Poulenc,
Inc. during their Vertac visit.

LEH:ew

Attachment

ADEQ0017678

INFORMATION FURNISHED TO RHONE-POULENC, INC.A. MATERIAL FURNISHED TO MR. W. CLAPPER AS OF AUGUST 14, 1980:

1. Copy of UC Investment Proposal No. 77-1 of 7/21/77.
2. General Information - Vertac Custom Manufacturing - (F. B. Lane).
3. Copy of SRI International preliminary draft of revised draft of Chemical Economics Handbook - (S. V. Kulkarni).
4. Copies of organization charts of 4 plants as of 8/12/80, as well as Employee Staffing Summary as of 8/12/80.
5. Listing of Vertac Registrations - 2 copies.
6. List of Supplemental Registrations updated 1/30/78 - (S. V. Kulkarni); as well as listing compiled 12/1/77 - (S. V. Kulkarni) - 2 copies.
7. Copy of letter directed to S. V. Kulkarni by A. T. Malone concerning FIFRA Data Compensation Claims dated 5/16/80.
8. Blue binder containing listing of 1979 State Label Registrations - 2 copies.
9. White binder entitled "1979-1980 Sales Comparison by Account and Assignment."
10. Copy of Dinitro Sales Analysis 1979-1980; 2,4-D Analysis; Comparative Actual Sales Prices KNO₃.
11. Copy of Memo from S. V. Kulkarni directed to G. T. Manley concerning potential market for 2,4-D.
12. Computer printout report "Sales by Product by Customer" as of 6/30/80.
13. Photocopy of P/W Audited Statement for December 31, 1979, together with copy of P/W letter to Shareholders and Board.
14. Blue binder entitled "Vertac, Inc. Product Specification Sheets" - (S. V. Kulkarni).
15. Binder entitled "Vertac Toxaphene 90, an Insecticidal Toxicant" - (S. V. Kulkarni).
16. Copies of Inventory Schedules as of 8/1/80 for each of 4 plants - (J. Hanna).
17. Copies of Custom Processing (Tolling) Fact Sheet (Schedule C and A) as of 7/25/80, marked "Confidential."

18. Copies of Sales and Gross Margin Schedules for 1979 and 1980, by plant, by product, by month - (J. Hanna).
19. 1981 Sales Forecast - (J. Hanna).
20. Vertac Financial Statement - June 30, 1980 - (J. Hanna).

B. MATERIAL FURNISHED TO MR. PELTZMAN AND MR. BOISDE

1. Monochloroacetic Acid:
 - a. Major Project Proposal - (L. Hacrow).
 - b. General Process Description - 10 MM Lbs./Year - Potential Licensee - (T. Bridger).
 - c. Simplified Process Flow Diagram - 97% - (T. Bridger).
 - d. Simplified Process Flow Diagram - 99% - (T. Bridger).
 - e. Set of PID's - 24 MM Lbs./Year Plant - (T. Bridger).
 - f. Set of PFD's with Material Balance - (T. Bridger).
 - g. Equipment Layout for MCA at Vicksburg - Methyl Parathion Plant - (T. Bridger).
 - h. Equipment List for 24 MM Lbs./Year Plant - (T. Bridger).
2. Simplified Process Flow Diagram - 2,4-D - (T. Bridger).
3. Copy of Agreement with Gulf Re: Gulf's plant on Vicksburg site) - (Bumpers).
4. Unit Cost Report:
 - a. Vicksburg - 6/30/80 and 12/31/79.
 - b. W. Helena - 6/30/80.
5. OSHA Report of Inspections dated 6/29/76 and 10/27/78 for Vicksburg - (M. Hawkes).
6. Employee Benefit Programs - Summary letter and supporting detail - (J. Goryance).
7. Copy of Chart of Accounts - (L. Harcrow).
8. Employee Listing - Vicksburg - Showing name, adress, social security number, sex, etc. (no salary information) - (D. Walker).

9. Product Specification Sheets - All Products - (R. Guidi).
10. Process Technology - Existing and Proposed Products (Booklet prepared by Tech Center) - (R. Guidi).
11. Custom Manufacturing - (G. Mather). Gave samples of:
 - a. Secrecy Agreement
 - b. Letter of Intent
 - c. Contract
12. Capital Expenditure Summary (\$12.6 MM) Proposed 1981 - (E. A. Munoz).
13. Manufacturing Cost Estimates - (L. Harcrow) - Atrazine 4-L; MCA-97% and 99%; Methyl Parathion; 2,4-DCA; 2,4-D Acid via Water Process; 2,4-DCP via Sulfuryl Chloride; DNOC.
14. Product Manufacturing Cost - Vicksburg - All Products - Actual 1979 and YTD 1980.
15. Insurance Coverages - Type, Cost, etc. - (J. Bumpers).
16. KNO₃ Selling Prices - Letter dated 7/1/80 - (N. Morgan).
17. Property Tax Assessment - 1979 - Vicksburg - (D. Walker).
18. Income Statement - 6/30/80 - Vicksburg - (D. Walker).
19. Capital Appropriation Policy - (L. Harcrow).
20. Capital Expenditure Status Report - 6/30/80 - (J. Hanna).
21. Methyl Parathion Explosion Report - (M. Hawkes).
22. Nitric Acid Plant Study - Prepared by B. McAvoy - (R. Guidi).
23. KNO₃ Manufacturing Cost Net of Cl₂ - (L. Harcrow).
24. Executive Payroll - Total Dollars only - (J. Bumpers).
25. Asset Ledger - Vicksburg and West Helena.
26. Environmental Data - (D. Karkkainen).
 - a. Summary Note
 - b. NPDES Permits - Vicksburg and West Helena
 - c. Air Emission Survey - Vicksburg

27. Plant Property Survey - Vicksburg and West Helena.
28. Overall Plot Plan - Plant - Vicksburg and West Helena.
29. List of offsites, utilities, major buildings, rail facilities, waste treatment, etc. - Vicksburg and West Helena.
30. P&ID's for Propanil, BSC, Atrazine, Toxaphene, Dinitro, Parathion, KNO₃/CL₂.
31. Plot plan and equipment list for all units - Vicksburg and West Helena.

L. E. Harcrow

LEH:ew



INTERNAL CORRESPONDENCE

DATE: August 18, 1980

TO: C. P. Bomar
J. C. Bumpers
R. A. Guidi
R. S. Kirk
G. F. Mather
~~XXXXXXXXXXXX~~
J. J. O'Neill

FROM: L. E. Harcrow

SUBJECT: Information Furnished
to Rhone-Poulenc, Inc.

Attached is a list of information furnished to Rhone-Poulenc,
Inc. during their Vertac visit.

LEH:ew

Attachment

INFORMATION FURNISHED TO RHONE-POULENC, INC.A. MATERIAL FURNISHED TO MR. W. CLAPPER AS OF AUGUST 14, 1980:

1. Copy of UC Investment Proposal No. 77-1 of 7/21/77.
2. General Information - Vertac Custom Manufacturing - (F. B. Lane).
3. Copy of SRI International preliminary draft of revised draft of Chemical Economics Handbook - (S. V. Kulkarni).
4. Copies of organization charts of 4 plants as of 8/12/80, as well as Employee Staffing Summary as of 8/12/80.
5. Listing of Vertac Registrations - 2 copies.
6. List of Supplemental Registrations updated 1/30/78 - (S. V. Kulkarni); as well as listing compiled 12/1/77 - (S. V. Kulkarni) - 2 copies.
7. Copy of letter directed to S. V. Kulkarni by A. T. Malone concerning FIFRA Data Compensation Claims dated 5/16/80.
8. Blue binder containing listing of 1979 State Label Registrations - 2 copies.
9. White binder entitled "1979-1980 Sales Comparison by Account and Assignment."
10. Copy of Dinitro Sales Analysis 1979-1980; 2,4-D Analysis; Comparative Actual Sales Prices KNO₃.
11. Copy of Memo from S. V. Kulkarni directed to G. T. Manley concerning potential market for 2,4-D.
12. Computer printout report "Sales by Product by Customer" as of 6/30/80.
13. Photocopy of P/W Audited Statement for December 31, 1979, together with copy of P/W letter to Shareholders and Board.
14. Blue binder entitled "Vertac, Inc. Product Specification Sheets" - (S. V. Kulkarni).
15. Binder entitled "Vertac Toxaphene 90, an Insecticidal Toxicant" - (S. V. Kulkarni).
16. Copies of Inventory Schedules as of 8/1/80 for each of 4 plants - (J. Hanna).
17. Copies of Custom Processing (Tolling) Fact Sheet (Schedule C and A) as of 7/25/80, marked "Confidential."

18. Copies of Sales and Gross Margin Schedules for 1979 and 1980, by plant, by product, by month - (J. Hanna).
19. 1981 Sales Forecast - (J. Hanna).
20. Vertac Financial Statement - June 30, 1980 - (J. Hanna).

B. MATERIAL FURNISHED TO MR. PELTZMAN AND MR. BOISDE

1. Monochloroacetic Acid:
 - a. Major Project Proposal - (L. Hacrow).
 - b. General Process Description - 10 MM Lbs./Year - Potential Licensee - (T. Bridger).
 - c. Simplified Process Flow Diagram - 97% - (T. Bridger).
 - d. Simplified Process Flow Diagram - 99% - (T. Bridger).
 - e. Set of PID's - 24 MM Lbs./Year Plant - (T. Bridger).
 - f. Set of PFD's with Material Balance - (T. Bridger).
 - g. Equipment Layout for MCA at Vicksburg - Methyl Parathion Plant - (T. Bridger).
 - h. Equipment List for 24 MM Lbs./Year Plant - (T. Bridger).
2. Simplified Process Flow Diagram - 2,4-D - (T. Bridger).
3. Copy of Agreement with Gulf Re: Gulf's plant on Vicksburg site) - (Bumpers).
4. Unit Cost Report:
 - a. Vicksburg - 6/30/80 and 12/31/79.
 - b. W. Helena - 6/30/80.
5. OSHA Report of Inspections dated 6/29/76 and 10/27/78 for Vicksburg - (M. Hawkes).
6. Employee Benefit Programs - Summary letter and supporting detail - (J. Goryance).
7. Copy of Chart of Accounts - (L. Hacrow).
8. Employee Listing - Vicksburg - Showing name, address, social security number, sex, etc. (no salary information) - (D. Walker).

9. Product Specification Sheets - All Products - (R. Guidi).
10. Process Technology - Existing and Proposed Products (Booklet prepared by Tech Center) - (R. Guidi).
11. Custom Manufacturing - (G. Mather). Gave samples of:
 - a. Secrecy Agreement
 - b. Letter of Intent
 - c. Contract
12. Capital Expenditure Summary (\$12.6 MM) Proposed 1981 - (E. A. Munoz).
13. Manufacturing Cost Estimates - (L. Harcrow) - Atrazine 4-L; MCA-97% and 99%; Methyl Parathion; 2,4-DCA; 2,4-D Acid via Water Process; 2,4-DCP via Sulfuryl Chloride; DNOC.
14. Product Manufacturing Cost - Vicksburg - All Products - Actual 1979 and YTD 1980.
15. Insurance Coverages - Type, Cost, etc. - (J. Bumpers).
16. KNO₃ Selling Prices - Letter dated 7/1/80 - (N. Morgan).
17. Property Tax Assessment - 1979 - Vicksburg - (D. Walker).
18. Income Statement - 6/30/80 - Vicksburg - (D. Walker).
19. Capital Appropriation Policy - (L. Harcrow).
20. Capital Expenditure Status Report - 6/30/80 - (J. Hanna).
21. Methyl Parathion Explosion Report - (M. Hawkes).
22. Nitric Acid Plant Study - Prepared by B. McAvoy - (R. Guidi).
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L. E. Harcrow

LEH:ew



VERTAC CHEMICAL CORPORATION
24th Floor • 5100 Poplar • Memphis, TN 38137 • 901-767-6851

TELEX 53927

September 2, 1980

Mr. Stephen A. Peltzman
Manager, Project Services and Planning
Rhone-Poulenc Inc.
120 Jersey Avenue
New Brunswick, New Jersey 08903

Dear Steve:

Enclosed are the following items you requested:

1. Confidential payroll listing amounting to \$110,000 monthly.
2. Memphis Office Expense (detail) for the year 1979.
3. Exempt payroll (in addition to item 1 above) - detail by individual.

Please call if you have any questions.

Sincerely yours,


Lloyd E. Harcrow

LEH:ap

Attachments

ADEQ0017675



INTERNAL CORRESPONDENCE

DATE: August 20, 1980

TO: File

FROM: G. F. Mather

cc: R. A. Guidi
+ R. B. Kirk
E. A. Munoz
M-304-109

SUBJECT: Rhone Poulenc Visit

From August 12th to 15th I reviewed Vertac Chemical's operations with Messr. Steve Peltzman and Paul Boisse. The tone of the review was quite good at the Vicksburg plant, West Helena plant, and the Memphis office. Mr. Peltzman is a thorough cost analysis engineer. Mr. Boisse was similarly thorough in process evaluation. In general terms, Mr. Peltzman's off the cuff valuation of the Vicksburg and West Helena plants was quite similar to my own broad brush opinion. My own cost figures in turn had been discussed with E. Munoz, R. Guidi, and P. Bomar previously. My main concern would be timing. It would appear that these very thorough individuals would require considerable time for their respective evaluations.

On August 9th I made a followup telecon with Steve Peltzman. Paul Boisse is on vacation this week as is Dr. Jacques Sibeud. Steve indicated the only information not received was an insurance company assessment of the plant valuations (a volume for each plant) which was fairly up to date. Mr. Bumpers had these volumes during his review with Steve Peltzman. I don't know if Vertac wanted to send this information, but Steve said it would save him a lot of time.

George Mather

:tes

ADEQ0017675



VERTAC CHEMICAL CORPORATION
24th Floor • 5100 Poplar • Memphis, TN 38137 • 901-787-6851

TELEX 53927

September 18, 1980

Mr. D. G. Harris
President
Rhone-Poulenc Inc.
Agricultural Division
P. O. Box 125
Monmouth Junction, New Jersey 08852

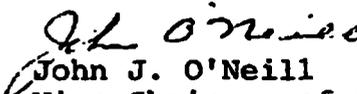
Dear George:

Thank you for the call this morning to advise the status of your acquisition studies of certain of Vertac's assets.

We will be pleased to provide any supplemental information that may be necessary in order to complete your management presentation which you advise is scheduled for October 2.

Enclosed is a list of principal equipment at the Vertac Vicksburg, West Helena, and West Memphis facilities which you requested.

Sincerely yours,


John J. O'Neill
Vice Chairman of the Board
and Chief Operating Officer

JJO'N:ap

Enclosure

ADEQ0017683

WEST MEMPHIS
EQUIPMENT LIST - HERBICIDE UNIT

I. Reactors

- A. 2,000 gallon, glass, agitated, full vacuum to 100 psi internal, 90 psi jacket.
- B. 4,000 gallon, glass, agitated, full vacuum to 100 psi internal, 90 psi jacket.
- C. 3,500 gallon, 347 ss, agitated, full vacuum to 150 psi internal, 75 psi jacket.

II. Slurry Storage

- A. 6,000 gallon, 316 ss, atmospheric
- B. 10,000 gallon, 316 ss, atmospheric

III. Centrifuge

48" x 30", 316 ss

IV. Rotary Vacuum Dryer

60 sq. ft., 316 ss, full vacuum, 15 psi jacket.

V. Auxiliaries

Bulk raw material and recycle storage
Refrigeration - 200 tons @ 20°F
HCl/SO₂ scrubber system
Full instrumentation, temp. and press @ RX's
N₂/dry air transfer and purge system @ RX's
Steam jet vacuum system (10MM hg)
Solvent recovery system (overhead)
Slurry system w/long radius piping & slurry pumps
Final filter at end of slurry system
Electronic weigh cells @ RX's
Emergency process sump (5,000 gallons)
Gravity raw material measuring bottles above RX's
Auxiliary glass/steel vessels for intermediates storage
Bulk raw material and recycle storage

WEST MEMPHIS

EQUIPMENT LIST-SPECIALTY CHEMICAL UNIT

I. Reactors

- A. 17,000 gallon, 316L ss, full vacuum to 60 psi internal, 150 psi jacket. 560 sq. ft. of jacketed heat-transfer area for either steam heating or water cooling. Nozzles (excluding jacket): 4-2", 2-3", 6-4", 2-14" (one for agitator), and 2,-23" (one for manway). Vessel is insulated. AUXILIARIES:
- a) Electronic weighing system, 200,000 lbs. in 10 lbs. increments. Howe.
 - b) 10 hp, 50 rpm, dual axial flow turbine agitator. All wetted parts 316ss. Lightnin' model 85.
 - c) 2 X 3 - 13, 316 ss, centrifugal pump with 50 hp, 1750 rpm motor. Goulds model 3196.
 - d) 1,000 sq. ft. exchanger, 4-pass tube, 2-pass shell, piped for circulation heating or cooling using the above pump, 304 ss, 75 psi shell; 304 ss, 150 psi tubes. Exchanger is also piped to condense and either collect or recycle vapors from reactor.
 - e) 750 sq. ft. exchanger piped for feed pre-heating or vaporization. 316 ss, 150 psi shell; 316 ss, 150 psi tubes.
 - f) 2-stage steam jet ejector with vacuum capability to 27" Hg. Schutte-Koerting.
- B. 4,000 gallon, 304 ss, full vacuum to 90 psi internal, 150 psi jacket. 280 sq. ft. of jacketed heat-transfer area for either steam heating or water cooling. Nozzles (excluding jacket): 2-2", 2-3", 4-4", 1-10", 1-16" (agitator), 1-18" (manway). Vessel is insulated. AUXILIARIES:
- a) Electronic weighing system, 5 lb. increments. Toledo.
 - b) 7- $\frac{1}{2}$ hp, 56 rpm, dual axial flow turbine agitator. All wetted parts 316 ss. Lightnin' model 84S.
 - c) 3 x 3, 316 ss positive displacement pump with 10 hp motor. Viking model LL4724.
 - d) 450 sq. ft. exchanger, 2-pass tube, 1-pass shell, piped for circulation heating or cooling using above pump. 316 ss, 150 psi tubes; carbon steel, 150 psi shell.
 - e) 350 sq. ft. condenser, 316 ss tubes, carbon steel shell.
 - f) 2-stage steam jet ejector with vacuum capability to 28" Hg. Schutte-Koerting.
 - g) Dual 350 gallon, 304 ss vacuum receivers

VICKSBURG PLANTTOXAPHENE

- 5 - 2,000-Gal. Pfaudler, Glass-lined, Standard Chlorinators (3)/Stripper (1)/Decanter
- 1 - 4,000-Gal. Pfaudler, Glass-lined, Standard
- 1 - 3,000-Gal. Pfaudler, Glass-lined, Chemstor
- 1 - Falling Film - HCl Absorber
- 1 - 30,000-Gal. Carbon Steel Storage
- 1 - 22,000-Gal. Carbon Steel Storage
- 4 - 30,000 Gal. Aluminum Storage

DNBP

- 1 - 4,000-Gal. Pfaudler, Glass-lined, Standard
- 1 - 7,500-Gal. SS316, Agitated Reactor
- 1 - 2,500-Gal. SS316, Agitated Reactor
- 1 - 12,000-Gal. SS316 with Coil Storage Tank
- 1 - 18,000-Gal. SS316 with Coil Storage Tank
- 1 - 30,000-Gal. SS316 with Heater Settling Tank
- 2 - 12,000-Gal. Carbon Steel Acid Storage
- 2 - 24,000-Gal. Carbon Steel OSBP Storage
- 1 - 6,000-Gal. SS316 Blend Tank on Scale
- 1 - 8,000-Gal. SS316, Decanter Tank

ATRAZINE

- 2 - 5,000-Gal. SS316 Reactors
- 1 - 15,000-Gal. Filtrate Holding Tank, Carbon Steel
- 1 - 250 ft.² Rotary Vacuum Filter
- 1 - Scrubber System (Fume Control/Solvent Recovery)
- 1 - 5,000-gal. SS316 Reboiler

ATRAZINE (Continued)

- 1 - 285-Ton, Refrigeration, York, @ 0°F with 10,000-Gal. Brine Storage
- 1 - 300-Ton, Refrigeration, Frick, @ -20°F with 23,000-Gal. Brine Storage
- 1 - 15,000-Gal. SS316, Filter Feed Tank
- 1 - Spray Dryer SS316, Bowen, 4.8MM BTU/Hour
- 1 - Spray Dryer SS316, Niro-Nichols, 2.2MM BTU/Hour

METHYL PARATHION (IDLE)

- 1 - 4,000-Gal. Pfaudler
- 1 - 1,000-Gal. Pfaudler
- 1 - 50 Ft.² SS316, Pfaudler Evaporator
- 1 - 4,000-Gal. SS316, Jacketed Reactor
- 1 - 5,000-Gal. SS316, Storage Tank
- 1 - 4,000-Gal. SS316, Storage Tank
- 2 - 4,000-Gal. SS316, Decanters
- 2 - 1,500-Gal. SS316, Receivers
- 1 - 200-Ton, 60°F Chilled Water System, Croll-Reynolds
- 1 - 285-Ton, Refrigeration 0°F with 17,000-Gal. Brine Storage
- 1 - Methanol Distillation Column
- 2 - 3'x10' SS316, Resin Beds

HNO₃ UNITS

- 2 - 60-Ton/Day DuPont Design, 55% Acid
- 1 - 120-Ton/Day DuPont Design, 55% Acid
- 2 - Horton Spheres, Ammonia Storage, 1,500-Ton each
- 6 - 300-Ton SS304, Acid Storage Tanks

FERTILIZER SOLUTION/STORAGE

- 3 - 40,000-BBL Storage Each, 1 Operational, 2 Requires Repairs
- 1 - 16,000-Gal. SS304, Neutralizer
- 2 - 30,000-Gal. Aluminum Blend Tanks on Scales
- 2 - 12,000-Gal. Aluminum Tanks
- 1 - 10,000-Gal. Aluminum Tanks

SOUTH PLANT UTILITIES

- 2 - Water Tube, Steam Boilers, 1 Gas/Oil, 1 Gas only; 110,000 Lbs. Per Hour Each @ 450 psi - Idle
- 1 - Cooling Tower, 40,000 gpm - Idle; 8 Cells, Turbine-Driven Pumps
- 1 - Compressor 17,000 SCFM @ 100 psi, Steam Turbine Driven - Idle
- 1 - Compressor 13,000 SCFM @ 100 psi, Steam Turbine Driven - Idle
- 1 - Compressor 20,000 SCFM @ 120 psi, Electric-Driven
- 1 - Cooling Tower, 10,000 gpm; 2 Cells, Electric-Driven Pump

KNO₃ UNIT - 90,000-TON KNO₃, 30,000-TON CHLORINE PER YEAR

- 1 - Bulk Raw Material (Muriate) Storage and Handling System, 2 Bins @ 750-Ton Each, Elevators, Etc.
- 1 - 900-Ton Refrigeration, Turbine-Driven
- 1 - Reaction System, 3 Columns
- 1 - Chlorine Distillation Column
- 1 - NO₂ Distillation Column
- 1 - Evaporator System, 3 Crystallizers
- 2 - Centrifuges
- 1 - Dryer 5'Ø x 36', Rotary
- 1 - Cooler, 8'x60', Rotary
- 1 - Prilling Tower
- 1 - Screening System, 2 Sweco Screens

KNO₃ UNIT (Continued)

- 2 - Bagging Systems - 1/100-Lb. Bags; 1/50-Lb. Bags; With Loading Facilities
- 1 - Chlorine Storage Tank and Associated Loading Facilities for Bulk and Cylinder Shipments
- 1 - N₂O₄ Storage Tank with Associated Loading Facilities for Bulk and Cylinder Shipments
- 1 - Strong Acid Unit; Produces 85% HNO₃ Acid for Reaction System
- 2 - Buildings, Bulk Product Storage Facilities with Associated Materials Handling, 25,000-Ton Capacity
- 1 - 86,000-lb./Hour, Foster Wheeler, 560 psig, Oil/Gas
- 1 - 115,000-Lb./Hour, Erie City Boiler, 550 psig, Oil/Gas
- 1 - 27,800-Lb./Hour, B/W Boiler, 200 psig, Gas Only
- 2 - Deionized Water Systems, 100 gpm
- 2 - Cooling Tower, 1/7,500 gpm; 1/3,500 gpm

IDLE EQUIPMENT

- 5 - 2,000-Gal. Pfaudler Reactors
- 1 - 1,500-Gal. Pfaudler Reactor, Glass-Lined, Chemstor
- 1 - 1,000-Gal. Pfaudler Reactor
- 5 - 2,000-Gal. Pfaudler, Glass-lined Reactors
- 1 - 1,500-Gal. Pfaudler, Glass-lined Reactor with Agitator
- 1 - 1,000-Gal. Pfaudler, Glass-lined Reactor
- 1 - 3,000-Gal. Pfaudler, Glass-lined Chemstor
- 1 - 30-Ton, Refrigeration Unit, Dunham-Bush at -30°F
- 1 - Column, Pfaudler, Glass-lined, 30"Ø x 10'

UNIT I

- 1 - 800-Gal. SS316, Agitated Jacketed Reactor
- 4 - 1,500-Gal. Pfaudler, Glass-Lined, Standard Reactors
- 2 - 3,000-Gal. Pfaudler DeDietrich, Glass-lined, Standard Reactors
- 1 - 1,000-Gal. DeDietrich, Glass-lined, Reactor
- 2 - Scrubbers, FRP, 18"Ø x 20'
- 1 - 12,000-Gal. Glass-lined Storage Tank
- 1 - 20,000-Gal. Carbon Steel Storage Tank
- 1 - 20,000-Gal. Carbon Steel Storage Tank
- 1 - 15,000-Gal. Carbon Steel Solvent Storage Tank
- 3 - 12,000-Gal. FRP Storage Tank
- 1 - 12,000-Gal. Aluminum Storage Tank

UNIT II

- 1 - 2,000-Gal. SS316 Jacketed Agitated Reactor with Column
- 1 - 2,000-Gal. Pfaudler, Glass-lined, Reactor with Glass Column (Corning)
- 2 - 15,000-Gal. SS304, Agitated Formulating Tank
- 1 - 17,000-Gal. Carbon Steel, Lined Product Holding Tank
- 1 - Packaging Line with Filler

UNIT III - (IDLE)

- 1 - 3,000-Gal. Pfaudler, Glass-lined, Standard with Overheads for Distillation
- 1 - 4,000-Gal. Pfaudler, Glass-lined, Standard Reactor
- 1 - Scrubber FRP, 2'Ø x 20'
- 3 - 20,000-Gal. Carbon Steel Storage Tanks
- 1 - 20,000-Gal. SS304, Storage Tank
- 1 - 17,000-Gal. SS304, Storage Tank

UNIT III - IDLE EQUIPMENT (Continued)

- 1 - 15,000-Gal. Pfaudler, Chemstor Glass-lined
- 1 - 6,000-Gal. SS316, Storage Tank
- 1 - 6,000-Gal. Carbon Steel, Storage Tank
- 1 - 5,000-Gal. Pfaudler, Chemstor

UNIT IV (IDLE)

- 1 - 4,000-Gal. Pfaudler, Glass-lined, Reactor with Overhead Systems and Receiver (SS)
- 1 - 3,000-Gal. DeDietrich, Glass-lined Reactor with Overhead Systems and Receiver (SS)
- 1 - 3,000-Gal. Carbon Steel Reactor with Coils
- 1 - 17,000-Gal. SS316, Agitated Slurry Tank
- 1 - 8,800-Gal. SS316, Agitated Formulation Holding Tank
- 1 - 4,000-Gal. SS304, Agitated Formulating Tank
- 1 - 20,000-Gal. Carbon Steel Storage Tank
- 1 - 15,000-Gal. Carbon Steel Storage Tank
- 1 - Packaging Line with Crandall Filler and Fume Exhausting System

UNIT V

- 1 - 35,000-Gal. SS347, Blaw-Knox Reactor
- 1 - 2,000-Gal. SS316, Cole Reactor
- 1 - 20,000-Gal. Aluminum Storage Tank
- 1 - 20,000-Gal. Carbon Steel Storage Tank
- 1 - 12,000-Gal. Carbon Steel Storage Tank
- 1 - 10,000-Gal. Carbon Steel Storage Tank

UTILITIES

- 3 - Boilers (Fire Tube); 2/10,000 Lb./Hour; 1/3,000 Lb./Hour
- 2 - Gas/Oil Fired, Small Unit Gas-Fired, 150 psi

- 1 - Hot Oil Heater (Struthers-Wells), Gas-Fired, 1.6MM BTU/Hour
- 3 - Marley Cooling Tower; 2/1,000 gpm; 1/700 gpm
- 2 - 200-Ton Dunham-Bush Refrigeration Units with 15,000-Gal. and 10,000-Gal. Brine Storage @ 0°F/20°F
- 1 - Norwalk Hydrogen Compressor, 4-Stage, Discharge 2,500 psig (max.)
- 1 - Nitrogen Service Unit, 9,000-Gal. Capacity
- 1 - Truck Weighing Scale
- 1 - Complete Biological Wastewater Treatment System with Permitted Discharge 90,000-Gal./Day

IDLE EQUIPMENT

- 1 - 4,000-Gal. Pfaudler, Glass-lined, Standard Reactor



VERTAC CHEMICAL CORPORATION

24th Floor • 5100 Poplar • Memphis, TN 38137 • 901-767-8851

TELEX 53927

February 10, 1981

Mr. William Clapper
Group Product Manager
Agrochemical Division
Rhone-Poulenc Inc.
P. O. Box 125
Monmouth Junction, New Jersey 08852

Dear Mr. Clapper:

Our records show that in addition to the material which you returned on January 5, 1981, the following information had been furnished to you:

Copy of UC Investment Proposal No. 77-1 of 7/21/77.

Listing of Vertac Registrations (2 copies).

List of Supplemental Registrations updated 1/30/78 - (S. V. Kulkarni); as well as listing compiled 12/1/77 - (S. V. Kulkarni) (2 copies) - Only one copy was returned.

Copy of letter directed to S. V. Kulkarni by A. T. Malone concerning FIFRA Data Compensation Claims dated 5/16/80.

Blue binder containing list of 1979 State Label Registrations (2 copies) - Only one copy was returned.

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Copy of Memo from S. V. Kulkarni directed to G. T. Manley concerning potential market for 2,4-D.

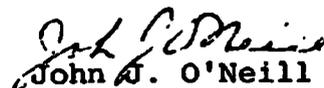
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Copies of Sales and Gross Margin Schedules for 1979 and 1980, by plant, by product, by month (J. Hanna).

1981 Sales Forecast (J. Hanna).

We would appreciate the prompt return to us of the above-listed items.

Sincerely yours,


John J. O'Neill

JJO'N:ap

See: *CPHanna*
X E Hanna

ADEQ0017660

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15. Binder entitled "Vertac Toxaphene 90, an Insecticidal Toxicant" - (S. V. Kulkarni).
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17. Copies of Custom Processing (Tolling) Fact Sheet (Schedule C and A) as of 7/25/80, marked "Confidential."

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B. MATERIAL FURNISHED TO MR. PELTZMAN AND MR. BOISDE

1. Monochloroacetic Acid:
 - a. Major Project Proposal - (L. Hacrow).
 - b. General Process Description - 10 MM Lbs./Year - Potential Licensee - (T. Bridger).
 - c. Simplified Process Flow Diagram - 97% - (T. Bridger).
 - d. Simplified Process Flow Diagram - 99% - (T. Bridger).
 - e. Set of PID's - 24 MM Lbs./Year Plant - (T. Bridger).
 - f. Set of PFD's with Material Balance - (T. Bridger).
 - g. Equipment Layout for MCA at Vicksburg - Methyl Parathion Plant - (T. Bridger).
 - h. Equipment List for 24 MM Lbs./Year Plant - (T. Bridger).
2. Simplified Process Flow Diagram - 2,4-D - (T. Bridger).
3. Copy of Agreement with Gulf Re: Gulf's plant on Vicksburg site) - (Bumpers).
4. Unit Cost Report:
 - a. Vicksburg - 6/30/80 and 12/31/79.
 - b. W. Helena - 6/30/80.
5. OSHA Report of Inspections dated 6/29/76 and 10/27/78 for Vicksburg - (M. Hawkes).
6. Employee Benefit Programs - Summary letter and supporting detail - (J. Goryance).
7. Copy of Chart of Accounts - (L. Harcrow).
8. Employee Listing - Vicksburg - Showing name, address, social security number, sex, etc. (no salary information) - (D. Walker).

9. Product Specification Sheets - All Products - (R. Guidi).
10. Process Technology - Existing and Proposed Products (Booklet prepared by Tech Center) - (R. Guidi).
11. Custom Manufacturing - (G. Mather). Gave samples of:
 - a. Secrecy Agreement
 - b. Letter of Intent
 - c. Contract
12. Capital Expenditure Summary (\$12.6 MM) Proposed 1981 - (E. A. Munoz).
13. Manufacturing Cost Estimates - (L. Harcrow) - Atrazine 4-L; MCA-97% and 99%; Methyl Parathion; 2,4-DCA; 2,4-D Acid via Water Process; 2,4-DCP via Sulfuryl Chloride; DNOC.
14. Product Manufacturing Cost - Vicksburg - All Products - Actual 1979 and YTD 1980.
15. Insurance Coverages - Type, Cost, etc. - (J. Bumpers).
16. KNO₃ Selling Prices - Letter dated 7/1/80 - (N. Morgan).
17. Property Tax Assessment - 1979 - Vicksburg - (D. Walker).
18. Income Statement - 6/30/80 - Vicksburg - (D. Walker).
19. Capital Appropriation Policy - (L. Harcrow).
20. Capital Expenditure Status Report - 6/30/80 - (J. Hanna).
21. Methyl Parathion Explosion Report - (M. Hawkes).
22. Nitric Acid Plant Study - Prepared by B. McAvoy - (R. Guidi).
23. KNO₃ Manufacturing Cost Net of CL₂ - (L. Harcrow).
24. Executive Payroll - Total Dollars only - (J. Bumpers).
25. Asset Ledger - Vicksburg and West Helena.
26. Environmental Data - (D. Karkkainen).
 - a. Summary Note
 - b. NPDES Permits - Vicksburg and West Helena
 - c. Air Emission Survey - Vicksburg

27. Plant Property Survey - Vicksburg and West Helena.
28. Overall Plot Plan - Plant - Vicksburg and West Helena.
29. List of offsites, utilities, major buildings, rail facilities, wate treatment, etc. - Vicksburg and West Helena.
30. P & ID's for Propanil, BSC, Atrazine, Toxaphene, Dinitro, Parathion, KNO₃/CL₂.
31. Plot plan and equipment list for all units - Vicksburg and West Helena.
32. Vicksburg - Description of Property Improvements; Market Data - Industrial Land Sales; Cost Approach to Value; Reconciliation and Final value Estimate; Cost New of Property for Insurance of Special Purpose Improvements.
33. West Helena - Improvements; Inventory and Unit Equipment Summary; Description of Improvements; Market Data - Land Sales; Cost Approach to Value; Reconciliation and Final Value Estimate; Cost New of Improvements for Insurance.
34. Vertac - Raw Material Usage and Conversion Costs Comparisons 1979 and 1980 Year-to-date.

(Items #32, #33, and #34 were mailed to S. Peltzman on August 22, 1980.)

35. Technical Department Organization Chart.
36. Resumes of Senior Technical Personnel.
37. Basic Employment Data of Same.
38. Authorization for Expenditure #239 pertaining to segregation of non-contaminated water at Vicksburg.

(Items #35, #36, #37, and #38 were mailed to Dr. Paul Boide on August 28, 1980.)

39. Employee - Listing
40. Product Sales Data (KNO₃, Chlorine, Toxaphene, Dinitro, Propanil).
41. Product Cost Data (Benzene Sulfonyl Chloride and Propanil Technical Information.)

(Items #39, #40, and #41 were mailed to S. Peltzman on August 29, 1980.)

Not Returned = ✓
 " " = 0

INFORMATION FURNISHED TO RHONE-POULENC, INC.

A. MATERIAL FURNISHED TO MR. W. CLAPPER AS OF AUGUST 14, 1980:

- x 1. Copy of UC Investment Proposal No. 77-1 of 7/21/77.
- ✓ 2. General Information - Vertac Custom Manufacturing - (F. B. Lane).
- ✓ 3. Copy of SRI International preliminary draft of revised draft of Chemical Economics Handbook - (S. V. Kulkarni).
- ✓ 4. Copies of organization charts of 4 plants as of 8/12/80, as well as Employee Staffing Summary as of 8/12/80.
- ✓ 5. Listing of Vertac Registrations - 2 copies.
- ✓ 6. List of Supplemental Registrations updated 1/30/78 - (S. V. Kulkarni); as well as listing compiled 12/1/77 - (S. V. Kulkarni) - 2 copies.
- ✓ 7. Copy of letter directed to S. V. Kulkarni by A. T. Malone concerning FIFRA Data Compensation Claims dated 5/16/80.
- ✓ 8. Blue binder containing listing of 1979 State Label Registrations - 2 copies.
- ✓ 9. White binder entitled "1979-1980 Sales Comparison by Account and Assignment."
- x 10. Copy of Dinitro Sales Analysis 1979-1980; 2,4-D Analysis; Comparative Actual Sales Prices KNO₃.
- x 11. Copy of Memo from S. V. Kulkarni directed to G. T. Manley concerning potential market for 2,4-D.
- ✓ 12. Computer printout report "Sales by Product by Customer" as of 6/30/80.
- ✓ 13. Photocopy of P/W Audited Statement for December 31, 1979, together with copy of P/W letter to Shareholders and Board.
- ✓ 14. Blue binder entitled "Vertac, Inc. Product Specification Sheets" - (S. V. Kulkarni).
- ✓ 15. Binder entitled "Vertac Toxaphene 90, an Insecticidal Toxicant" - (S. V. Kulkarni).
- 16. Copies of Inventory Schedules as of 8/1/80 for each of 4 plants - (J. Hanna).
- ✓ 17. Copies of Custom Processing (Tolling) Fact Sheet (Schedule C and A) as of 7/25/80, marked "Confidential."

✓ 18. Copies of Sales and Gross Margin Schedules for 1979 and 1980, by plant, by product, by month - (J. Hanna).

X 19. 1981 Sales Forecast - (J. Hanna).

✓ 20. Vertac Financial Statement - June 30, 1980 - (J. Hanna).

2 copies rec'd

B. MATERIAL FURNISHED TO MR. PELTZMAN AND MR. BOISDE

✓ 1. Monochloroacetic Acid:

✓ a. Major Project Proposal - (L. Hacro).

✓ b. General Process Description - 10 MM Lbs./Year - Potential Licensee - (T. Bridger).

✓ c. Simplified Process Flow Diagram - 97% - (T. Bridger).

✓ d. Simplified Process Flow Diagram - 99% - (T. Bridger).

✓ e. Set of PID's - 24 MM Lbs./Year Plant - (T. Bridger).

✓ f. Set of PFD's with Material Balance - (T. Bridger).

✓ g. Equipment Layout for MCA at Vicksburg - Methyl Parathion Plant - (T. Bridger).

✓ h. Equipment List for 24 MM Lbs./Year Plant - (T. Bridger).

X (2) Simplified Process Flow Diagram - 2,4-D - (T. Bridger).

✓ 3. Copy of Agreement with Gulf Re: Gulf's plant on Vicksburg site) - (Bumpers).

✓ 4. Unit Cost Report:

✓ a. Vicksburg - 6/30/80 and 12/31/79.

✓ b. W. Helena - 6/30/80.

✓ 5. OSHA Report of Inspections dated 6/29/76 and 10/27/78 for Vicksburg - (M. Hawkes).

✓ 6. Employee Benefit Programs - Summary letter and supporting detail - (J. Goryance).

✓ ~~7. Copy of Chart of Accounts - (L. Hacro).~~

✓ 8. Employee Listing - Vicksburg - Showing name, address, social security number, sex, etc. (no salary information) - (D. Walker). - *also, W. Helena's*

- ✓9. Product Specification Sheets - All Products - (R. Guidi).
- ✓10. Process Technology - Existing and Proposed Products (Booklet prepared by Tech Center) - (R. Guidi).
- ✓11. Custom Manufacturing - (G. Mather). Gave samples of:
 - ✓a. Secrecy Agreement
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- ✓14. Product Manufacturing Cost - Vicksburg - All Products - Actual 1979 and YTD 1980.
- ✓15. Insurance Coverages - Type, Cost, etc. - (J. Bumpers).
- ✓16. KNO₃ Selling Prices - Letter dated 7/1/80 - (N. Morgan).
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- ✓22. Nitric Acid Plant Study - Prepared by B. McAvoy - (R. Guidi).
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- ✓25. Asset Ledger - Vicksburg and West Helena.
- ✓26. Environmental Data - (D. Karkkainen).
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 - ✓b. NPDES Permits - Vicksburg and West Helena
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- ✓ 27. Plant Property Survey - Vicksburg and West Helena.
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- ✓ 34. Vertac - Raw Material Usage and Conversion Costs (Vertac) Comparisons 1979 and 1980 Year-to-date.

(Items #32, #33, and #34 were mailed to S. Peltzman on August 22, 1980.)

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(Items #35, #36, #37, and #38 were mailed to Dr. Paul Boide on August 28, 1980.)

- ✓ 39. Employee - Listing - 20 *Subsidiary*
- ✓ 40. Product Sales Data (KNO₃, Chlorine, Toxaphene, Dinitro, Propanil).
- ✓ 41. Product Cost Data (Benzene Sulfonyl Chloride and Propanil Technical Information.)

(Items #39, #40, and #41 were mailed to S. Peltzman on August 29, 1980.)



INTERNAL CORRESPONDENCE

DATE: July 16, 1981

TO: C. P. Bomar, Jr.

FROM: L. E. Harcrow

CC:

SUBJECT: Rhone-Poulenc, Inc.

Information was given to Rhone-Poulenc to aid in their acquisition study of Vertac.

All of the information was returned except the circled items on the attached list dated September 2, 1980.

We could ask again for the return of these items, but they could have made copies.

Please advise.

TRANSMITTAL MEMO

FROM

C. P. BOMAR, JR.

L E Harcrow

LEH:ew_m

Attachment

TO *JD* DATE 7/20/81

<input type="checkbox"/> For your information	<input type="checkbox"/> Please reply and copy me
<input type="checkbox"/> Your comments, please	<input type="checkbox"/> Review and reply to _____
<input type="checkbox"/> Review and call me	<input type="checkbox"/> Review and forward to _____
<input type="checkbox"/> Review and file	<input type="checkbox"/> Attach previous correspondence and return to me
<input type="checkbox"/> Review and return to me	

COMMENTS/REPLY

L E Harcrow

[Signature]



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DATE: July 16, 1981

TO: C. P. Bomar, Jr.

FROM: L. E. Harcrow

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Please advise.

LEH:ew *ew*

Attachment

RHÔNE-POULENC INC.

P.O. Box 2009 - 120 Jersey Avenue - New Brunswick, New Jersey 08903 - Telephone: (201) 846-7700

February 20, 1981

E/1.064

Mr. John J. O'Neill
Vertac Chemical Corporation
24th Floor
5100 Poplar
Memphis, Tennessee 38137

Dear Mr. O'Neill:

Enclosed please find all of the documents which I have in my possession concerning your corporation. I understand that Dr. Paul M. Boisdé will be mailing the documents which he has and Mr. William Clapper has already shipped to your attention his items.

Kindly review the enclosures and let me know if everything is in order.

Thank you.

Sincerely,



S. Peltzman
Manager -
Project Services & Planning

SP:JP

Enclosures

cc: D.S.Blackford

RHÔNE-POULENC INC.

RECEIVED
FEB 23 1981

P.O. Box 2009 - 120 Jersey Avenue - New Brunswick, New Jersey 08903 - Telephone: (201) 846-7700

February 19, 1981

E/1.060

Mr. John J. O'Neill
Vertac Chemical Corporation
24th Floor
5100 Poplar
Memphis, Tennessee 38137

Dear Mr. O'Neill:

Thank you for your letter of February 10, 1981. We are currently coordinating the transmittal of the documents you requested and expect to have them mailed to you by end of this week.

Sincerely,



S. Peltzman
Manager -
Project Services & Planning

SP:JP

cc: D.S. Blackford

6/9/81

AL CORPORATION
Memphis, TN 38137 • 901-767-6851

TELEX 53927

Linno,

May 10, 1981

✓ items were returned
0 " " not "

PJA

Also, see JJO letter
dated 2/10/81 (attached) to
Mr. Clapper.

ning

7 08903

Information listed in the
plied to you and Mr. Boisdé
acquisition study of Vertac.

Your prompt return of all of this material is
requested.

Sincerely,

J. J. O'Neill
John J. O'Neill

JJO'N:ap

Attachment

see: C/Boisde ✓
JC MacLean



VERTAC CHEMICAL CORPORATION

24th Floor • 5100 Poplar • Memphis, TN 38137 • 901-767-6851

TELEX 53927

February 10, 1981

Mr. Stephen A. Peltzman
Manager
Project Services and Planning
Rhone-Poulenc Inc.
120 Jersey Avenue
New Brunswick, New Jersey 08903

Dear Mr. Peltzman:

Our records show that the information listed in the attached exhibit was supplied to you and Mr. Boide in connection with your acquisition study of Vertac.

Your prompt return of all of this material is requested.

Sincerely,

J. J. O'Neill
John J. O'Neill

JJO'N:ap

Attachment

*see: C/Boide ✓
J. J. O'Neill*

ADEQ0017651

MATERIAL FURNISHED TO MR. PELTZMAN AND MR. BOISDE

- ✓ 1. Monochloroacetic Acid:
 - ✓ a. Major Project Proposal - (L. Hacrow).
 - ✓ b. General Process Description - 10 MM Lbs./Year - Potential Licensee - (T. Bridger).
 - ✓ c. Simplified Process Flow Diagram - 97% - (T. Bridger).
 - ✓ d. Simplified Process Flow Diagram - 99% - (T. Bridger).
 - ✓ e. Set of PID's - 24 MM Lbs./Year Plant - (T. Bridger).
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 - ✓ g. Equipment Layout for MCA at Vicksburg - Methyl Parathion Plant - (T. Bridger).
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 - ✓ b. W. Helena - 6/30/80.
- ✓ 5. OSHA Report of Inspections dated 6/29/76 and 10/27/78 for Vicksburg - (M. Hawkes).
- ✓ 6. Employee Benefit Programs - Summary letter and supporting detail - (J. Goryance).
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 - ✓ c. Contract
- ✓ 12. Capital Expenditure Summary (\$12.6 MM) Proposed 1981 - (E. A. Munoz).
- 13. Manufacturing Cost Estimates - (L. Harcrow) - Atrazine 4-L; MCA-97% and 99%; Methyl Parathion; 2,4-DCA; 2,4-D Acid via Water Process; 2,4-DCP via Sulfuryl Chloride; DNOC.
- ✓ 14. Product Manufacturing Cost - Vicksburg - All Products - Actual 1979 and YTD 1980.
- ✓ 15. Insurance Coverages - Type, Cost, etc. - (J. Bumpers).
- ✓ 16. KNO₃ Selling Prices - Letter dated 7/1/80 - (N. Morgan).
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- ✓ 18. Income Statement - 6/30/80 - Vicksburg - (D. Walker).
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- ✓ 21. Methyl Parathion Explosion Report - (M. Hawkes).
- ✓ 22. Nitric Acid Plant Study - Prepared by B. McAvoy - (R. Guidi).
- 23. KNO₃ Manufacturing Cost Net of CL₂ - (L. Harcrow).
- ✓ 24. Executive Payroll - Total Dollars only - (J. Bumpers).
- ✓ 25. Asset Ledger - Vicksburg and West Helena.
- ✓ 26. Environmental Data - (D. Karkkainen).
 - ✓ a. Summary Note
 - ✓ b. NPDES Permits - Vicksburg and West Helena
 - ✓ c. Air Emission Survey - Vicksburg



VERTAC CHEMICAL CORPORATION

24th Floor • 5100 Poplar • Memphis, TN 38137 • 901-767-6851

TELEX 83927

February 10, 1981

Mr. William Clapper
Group Product Manager
Agrochemical Division
Rhone-Poulenc Inc.
P. O. Box 125
Monmouth Junction, New Jersey 08852

Dear Mr. Clapper:

Our records show that in addition to the material which you returned on January 5, 1981, the following information had been furnished to you:

- Copy of UC Investment Proposal No. 77-1 of 7/21/77.
- ✓ Listing of Vertac Registrations (2 copies).
- ✓ List of Supplemental Registrations updated 1/30/78 - (S. V. Kulkarni); as well as listing compiled 12/1/77 - (S. V. Kulkarni) (2 copies) - Only one copy was returned.
- Copy of letter directed to S. V. Kulkarni by A. T. Malone concerning FIFRA Data Compensation Claims dated 5/16/80.
- ✓ Blue binder containing list of 1979 State Label Registrations (2 copies) - Only one copy was returned.
- Copy of Dinitro Sales Analysis 1979-1980; 2,4-D Analysis; Comparative Actual Sales Prices KNO₃.
- Copy of Memo from S. V. Kulkarni directed to G. T. Manley concerning potential market for 2,4-D.
- Copies of Inventory Schedules as of 8/1/80 for each of four plants (J. Hanna).
- ✓ Copies of Sales and Gross Margin Schedules for 1979 and 1980, by plant, by product, by month (J. Hanna).
- 1981 Sales Forecast (J. Hanna).

We would appreciate the prompt return to us of the above-listed items.

Sincerely yours,

John J. O'Neill
John J. O'Neill

JJO'N:ap

A.C.C. CPBamar
L.E. Harasiewicz

ADEQ0017651



P O BOX 125 • MONMOUTH JUNCTION, N.J. 08852 • TELEPHONE: 201-297-0100 • TELEX 84-4527

January 5, 1981
Ref. No. WMC/81/001

Mr. John J. O'Neill
Vice Chairman
Vertac Chemical Corporation
24th Floor
5100 Poplar Avenue
Memphis, TN 38137

Dear Mr. O'Neill:

Enclosed please find all the information loaned to us
from your file.

Thank you for giving us an opportunity to get to know
you and your company.

Very truly yours,

RHONE-POULENC CHEMICAL COMPANY

William M. Clapper
William M. Clapper
Group Product Manager
Agrochemical Division

WMC:ngc

ADEQ0017651

EXHIBIT E-1

RHONE-POULENC INC.
AGROCHEMICAL DIVISION

2,4-DB SALES HISTORY

	<u>1980</u> <u>SALES</u>	<u>1981</u> <u>SALES</u>	<u>1982</u> <u>SALES</u>
<u>BUTOXONE</u>			
R-P Label	74,259	76,912	73,242g
Average Selling Price	\$9.04	\$8.26	\$7.64
Private Label	92,844	80,120	78,444g
Average Selling Price	\$8.28	\$7.51	\$6.82
TOTAL BUTOXONE	167,103g	157,032	151,686g
<u>BUTOXONE ESTER</u>			
R-P Label	18,693	19,598	17,079g
Average Selling Price	\$12.33	\$12.39	\$12.41
<u>BUTOXONE AMINE</u>			
R-P Label	--	3,132	7,556g
Average Selling Price	--	\$8.49	\$7.66
Private Label	7,848	6,480	9,612g
Average Selling Price	\$9.61	\$8.50	\$7.35
TOTAL BUTOXONE AMINE	7,848	9,612	17,168g
TOTAL LBS. AI	360,685	347,726	348,053

DJU: 3/15/83

EXHIBIT E-1OPEN ORDERS AS OF 3/14/832,4-DB

	<u>QUANTITY</u>	<u>SHIP DATE</u>
<u>BUTOXONE:</u>		
<u>R-P Label</u>		
MD Agchem Inc.	324	March 31
NC Chowan Ag Products	1,512	March 31
NC W. S. Clark & Sons	<u>2,052</u>	March 31
	<u>3,888</u>	
 <u>BUTOXONE ESTER:</u>		
CA Calarco Inc.	20	March 14
WA Farmers Union Central Exchange	342	March 10
ID Puregro Company	720	March 15
WA Soil Crop Inc.	<u>180</u>	March 10
	<u>1,262</u>	
 <u>2,4-DB ACID:</u>		
Uniroyal	<u>16,000 lbs.</u>	Release through December 31, 1983
	<u>16,000</u>	

EXHIBIT E-1

BUTOXONE AMINE

<u>CUSTOMER</u>	1981 Y-T-D <u>SALES</u>	1982 Y-T-D <u>SALES</u>	<u>VARIANCE</u>
Terra Chem. Int'l. Inc.	—	5,184	5,184
Valley Chemical Company	<u>3,132</u>	<u>2,372</u>	<u>(760)</u>
PRODUCT TOTAL	<u>3,132</u>	<u>7,556</u>	<u>4,424</u>

BUTOXONE AMINE PRIVATE LABEL

<u>CUSTOMER</u>	1981 Y-T-D <u>SALES</u>	1982 Y-T-D <u>SALES</u>	<u>VARIANCE</u>
Terra Chem. Int'l Inc.	1,296	1,620	324
Voluntary Purchasing Groups	<u>5,184</u>	<u>7,992</u>	<u>2,802</u>
PRODUCT TOTAL	<u>6,480</u>	<u>9,612</u>	<u>3,132</u>

BUTOXONE ESTER

<u>CUSTOMER</u>	1981 Y-T-D <u>SALES</u>	1982 Y-T-D <u>SALES</u>	<u>VARIANCE</u>
Agricultural Products Co.	270	900	630
Arizona Agrochemical Corp.	—	180	180
B. F. Chemical Company	180	—	(180)
Bakersfield Ag Chem.	—	165	165
Balcom Chemical Company	360	—	(360)
Barber-Rowland Company	—	180	180
Bingham Cooperative Inc.	67	—	(67)
Britz Chemical Co. Inc.	180	180	—
Calarco Inc.	4,678	4,020	(658)
Cam Chemical Company	15	—	(15)
Chemtec, Inc.	510	—	(510)
Farmers Union Central Exchange	864	1,585	721
FMC Corporation	300	—	(300)
Helena Chemical Company	577	844	267

Continued...

EXHIBIT E-1

BUTOXONE ESTER
 (continued)

<u>CUSTOMER</u>	<u>1981</u> <u>Y-T-D</u> <u>SALES</u>	<u>1982</u> <u>Y-T-D</u> <u>SALES</u>	<u>VARIANCE</u>
Interlink Ag Chemicals Inc.	700	—	(700)
Lovelock Seed Company	540	1,620	1,080
Mid-Cal Farms Inc.	310	—	(310)
Occidental Chemical Company	345	180	(165)
Pacoast Chemical Company	470	1,070	600
Professional Farm Service	—	110	110
Puregro Company	360	720	360
Puregro Company	360	360	—
Quincy Farm Chemicals	216	—	(216)
Simplot Soilbuilders	360	—	(360)
Soil & Crop Inc.	—	540	540
John Taylor Fertilizers Co.	710	900	190
Tri-State Chemicals Inc.	732	285	(447)
Tri River Chemical	1,050	—	(1,050)
Umapine Chemical Applicators	180	—	(180)
United Agri Products	1,080	1,080	—
Union Chemical Division	720	—	(720)
United Agri Products - Hawaii	10	—	10
USS Agri-Chemicals	524	—	(524)
Valley Warehouse Company	—	26	26
Van Waters & Rogers	—	60	60
Walla Walla Farmers Coop.	—	360	360
Westchem Agricultural Chem.	180	360	180
Wilbur Ellis Co.	2,450	1,204	(1,246)
Western Farm Service Inc.	—	150	150
Western Seed & Supply Inc.	300	—	(300)
PRODUCT TOTAL	<u>19,598</u>	<u>17,079</u>	<u>(2,519)</u>

BUTOXONE PRIVATE LABEL

<u>CUSTOMER</u>	<u>1981</u> <u>Y-T-D</u> <u>SALES</u>	<u>1982</u> <u>Y-T-D</u> <u>SALES</u>	<u>VARIANCE</u>
Chem Nut Inc.	12,312	12,312	—
Dune Co.	320	—	(320)
Gold Kist Inc.	16,020	—	(16,020)
Helena Chemical Company	2,052	4,104	2,052
Red Panther Chemical Company	26,124	32,832	6,708
Terra Chem. Int'l Inc.	8,424	21,816	13,392
USS Agri Chemicals	<u>14,868</u>	<u>7,380</u>	<u>(7,488)</u>
PRODUCT TOTAL	<u>80,120</u>	<u>78,444</u>	<u>(1,676)</u>

Continued...

EXHIBIT E-1

BUTOXONE

<u>CUSTOMER</u>	<u>1981 Y-T-D SALES</u>	<u>1982 Y-T-D SALES</u>	<u>VARIANCE</u>
Agchem Inc.	576	576	—
Agchem Service Inc.	1,008	980	(28)
Agricultural Products Co.	180	—	(180)
Alexandria Seed Co.	—	1,296	1,296
Barber-Rowland Company	180	—	(180)
Bel Chemical & Supply Co. Inc.	108	324	216
Bertola Farm Supply	216	108	(108)
Blackwell Seed & Chemical	—	108	108
Cardinal Chemical	2,592	1,208	(1,384)
Carolina Eastern Chem. Co. Inc.	—	460	460
Central Chemical Corp.	—	180	180
Chemtec, Inc.	605	—	(605)
Chowan Ag Products	2,052	2,124	72
Cleveland Chemical Co.	4,316	—	(4,316)
W. S. Clark & Sons	1,728	1,764	36
Coastal Chemical Company	970	—	(970)
Cotton States Chemical-	—	4,104	4,104
Crescent Chemical Co.	4,212	3,780	(432)
Culpepper Farmers Coop.	216	216	—
Delta Purchasing Federation	—	1,080	1,080
Dotson and Son	1,188	—	(1,188)
Dune Co.	2,975	3,780	805
Estech General Chemicals Corp.	972	—	(972)
Farmers Supply Co-Op	648	756	108
Farmers Union Central Exchange	972	—	(972)
FCX Inc.	108	—	(108)
FMC Corporation	1,620	610	(1,010)
Georgia Ag Chemicals	432	1,200	768
Gold Kist Inc.	—	4,860	4,860
Helena Chemical Company	17,409	6,879	(10,530)
Interlink Ag Chemicals Inc.	180	—	(180)
January Company	24	—	(24)
Kaiser Aluminum & Chemical Corp.	1,512	1,728	216
Land 'O Lakes Inc.	—	720	720
MFC Services	—	1,505	1,504
Midland Cooperatives Inc.	612	—	(612)
Old Fox Agri. Sales Inc.	108	—	(108)
Pacoast Chemical Company	—	215	215
Pennfield Corp.	864	180	(684)
Puregro Company	1,195	2,088	893
Puregro Company	360	—	(360)
Rangens Inc.	—	180	180
Rosen Livestock	1,152	—	(1,152)
Royster Company	—	432	432
Simcal Soilbuilders	55	—	(55)
Sim Cal Soil Builders	—	180	180

Continued...

BUTOXONE
 (continued)

<u>CUSTOMER</u>	<u>1981</u> <u>Y-T-D</u> <u>SALES</u>	<u>1982</u> <u>Y-T-D</u> <u>SALES</u>	<u>VARIANCE</u>
Smith-Douglas Inc.	324	—	(324)
Soil & Crop Inc.	180	505	325
Soilserv Inc.	140	—	(140)
Southern Agricultural Chem.	504	—	(504)
Southern Farmers Assoc.	3,564	3,564	—
John Taylor Fertilizers Co.	936	180	(756)
Taylor Stuckey Inc.	—	2,808	2,808
Tide Products Inc.	1,512	2,556	1,044
Tidewater Agricorp. Inc.	—	324	324
Triangle Chemicals	756	4,212	3,456
United Agri Products	—	540	540
Union Chemical Division	180	—	(180)
USS Agri Chemicals	1,908	1,080	(828)
Van Waters & Rogers	—	180	180
Walla Walls Farmers Coop.	—	180	180
Warne Chemical & Equipment	—	540	540
West Central Chemical	216	756	540
Westchem Agricultural Chem.	360	—	(360)
Western Farm Service	360	360	—
Wilbur Ellis Company	315	180	(135)
Wilbur Ellis Company	360	1,440	1,080
Wilbur Ellis Company	—	360	360
Western Farm Service Inc.	20	1,605	1,585
Woolfolk Chemical Works	10,908	4,968	(5,940)
Warterfield Grain Co.	3,024	2,168	(856)
Wyatt & Crews	—	756	756
PRODUCT TOTAL	<u>76,912</u>	<u>73,242</u>	<u>(3,670)</u>

BILL OF SALE

Rhone-Poulenc Inc., a New York corporation, in consideration of the sum of Ten Dollars (\$10.00) and other valuable consideration, receipt of which is hereby acknowledged, and pursuant to that certain Agreement (the "Agreement") dated *January 1*, 1983 between Rhone-Poulenc Inc. ("RP") and Vertac Chemical Corporation ("Vertac"), a Delaware corporation, RP does hereby sell, assign, transfer, convey and deliver to Vertac the following described property:

1. The EPA and state pesticide registrations for all of RP's technical products and end-use formulations containing the active ingredient 2,4-DB or the salts or esters thereof (hereinafter collectively the "Products"), such registrations being identified or described in Exhibit A attached to the Agreement, together with all of RP's files concerning the registrations.
2. All scientific data, including toxicity, efficacy and other data developed by or for RP for the purpose of supporting the registrations, including but not limited to such data heretofore submitted to EPA or any other governmental agency in the United States, as more particularly described in Exhibit B attached to the Agreement, together with all rights heretofore or hereafter accrued or accruing in connection therewith.
3. The United States trademarks "Butoxone SB" and "Butoxone", Registration Nos. 784,227 and 784,229 respectively, identified in Exhibit C of the Agreement, together with the goodwill and contract rights associated therewith.

4. All confidential statements of formula, formulation recipes, manufacturing procedures, analytical specifications and methods, safety information and all manuals and related documents associated with the manufacture, formulation and packaging of Products.
5. All research and engineering files, summaries and reports relating to the manufacture and uses of 2,4-DB, including but not limited to the information identified in Exhibit D of the Agreement.
6. A current list of RP's customers for the Products including the volumes purchased by each such customer, and all related customer files, for each of the calendar years 1980, 1981 and 1982 and for the current year to date.
7. All of RP's inventories of end-use Products in bulk and packaged in containers and labeled under EPA Registrations Nos. 359-677, 359-358, 359-409 and 359-502, and all inventories of 2,4-DB and isoctyl ester and butyl ester of 2,4-DB as shall be on hand as of Closing, as identified in E-~~1~~^{RHV} of the Agreement.

This Bill of Sale is being executed and delivered by Rhone-Poulenc Inc. pursuant to the provisions of the Agreement.

RP hereby represents and warrants to Vertac that it has and does hereby convey good and marketable title to all of the property

conveyed hereunder, free and clear of all pledges, liens, claims, encumbrances, security interests or mortgages whatsoever, except for such matters, if any, as are expressly referred to in or permitted by the Agreement.

IN WITNESS WHEREOF, RP has caused this Bill of Sale to be duly executed by its duly authorized officers and its corporate seal to be hereunto affixed as of *March 21*, 1983.

RHONE-POULENC INC.

By: *Robert M. Verdugue*
President

(Corporate Seal)

ATTEST:

Vincent D. O'Neil
Secretary

ASSIGNMENT

WHEREAS, Rhone-Poulenc Inc. ("Assignor"), a New York corporation having offices at Monmouth Junction, New Jersey, owner of the trademarks set forth in the attached Schedule A, is transferring by purchase to Vertac Chemical Corporation ("Assignee"), a Delaware corporation having offices at 5100 Poplar Avenue, Memphis, Tennessee, Assignor's business and goodwill connected with and symbolized by said marks in the United States.

NOW, THEREFORE, for good and valuable consideration, receipt of which is hereby acknowledged, Assignor, by these presents, does sell, assign and transfer unto Assignee the entire right, title and interest of Assignor in and to the said marks in the United States, together with the goodwill of the business connected with and symbolized by the said marks, the registrations for said marks in the United States set forth in the attached Schedule A, and any and all contractual rights involving the said marks.

IN WITNESS WHEREOF, Rhone-Poulenc Inc. has caused this Assignment to be executed in its behalf by its duly authorized officer this 21st day of March, 1983.

RHONE-POULENC INC.

By:

Robert M. Verburg
President

STATE OF NEW JERSEY:

: ss.

COUNTY OF MIDDLESEX:

Before me, a Notary Public in and for said State and County, duly commissioned and qualified, personally appeared Robert M. Verburg, with whom I am personally acquainted and who, upon oath, acknowledged himself to be the President of Rhone-Poulenc Inc., the within named bargainer, a corporation, and that he, as such President, being authorized so to do, executed the foregoing instrument for the purposes therein contained by signing the name of the corporation by himself as such President.

WITNESS my hand and Notarial Seal at office this 21st day of March, 1983.

Deborah Sherwen

DEBORAH SHERWEN
A Notary Public of New Jersey
My Commission Expires 1-9-84

ADEQ0018342

SCHEDULE A

Trademark

U.S. Registration No.

BUTOXONE SB

784,227

BUTOXONE

784,229



VERTAC CHEMICAL CORPORATION

24th Floor • 5100 Poplar • Memphis, TN 38137 • 901-767-6851

TELEX 58927

March 23, 1983

Process Coordination Branch (3)
Registration Division (TS-767c)
Office of Pesticide Programs
Environmental Protection Agency
Crystal Mall Bldg. 2 Room 1120
Jefferson Davis Highway
Arlington, VA 22202

Attention: Ms Lela Sykes

Subject: Transfer of Registrations - Rhone-Poulenc, Inc.
to Vertac Chemical Corporation

Dear Ms. Sykes:

Enclosed please find a letter of transfer dated March 16, 1983 from John E. Davies, Senior Vice-President of Rhone-Poulenc, Inc., requesting transfer of the seven pesticide registrations identified therein to Vertac Chemical Corporation.

Please expedite transfer of these seven registrations to Vertac Chemical Corporation and advise us of the new registration numbers assigned as soon as possible.

Sincerely,

VERTAC CHEMICAL CORPORATION

J. R. Fisher
Manager of Technical Services

JRF:dh

STATE OF TENNESSEE
COUNTY OF SHELBY

Before me, a Notary Public in and for said State and County, duly commissioned and qualified, personally appeared J. R. Fisher, with whom I am personally acquainted and who, upon oath, acknowledged himself to be the Manager of Technical Services of Vertac Chemical Corporation, the within named bargainor, a corporation, and that he, as such Manager of Technical Services, being authorized so to do, executed the foregoing instrument for the purposes therein contained by signing the name of the corporation by himself as Manager of Technical Services.

Witness my hand and notarial seal this 23rd day of March, 1983.

Notary Public

My Commission Expires 12-31-84

ADEQ0018350

RHÔNE-POULENC INC.

P.O. Box 125 - Black Horse Lane - Monmouth Junction, New Jersey 08852 - Telephone: (201) 297-0100 - Telex: 844482, 844527

March 16, 1983

Mr. Lela Sykes
Process Coordination Branch (TS-767C)
Registration Division
Office of Pesticide Programs
Environmental Protection Agency
Crystal Mall Bldg. 2 Room 1120
Jefferson Davis Highway
Arlington, VA 22202

Dear Mrs. Sykes:

Rhone-Poulenc Inc., Agrochemical Division located at P.O. Box 125, Monmouth Junction, New Jersey, 08852 hereby transfers and assigns to Vertac Chemical Corporation located at 5100 Poplar Avenue, Memphis, Tennessee, 38187 all rights, titles and interest, if any, in and to the following labels. Vertac Chemical Corporation has accepted the transfer.

EPA Reg. No. 359-358	Butoxone Amine Herbicide
359-409	Butoxone Ester
359-502	Butoxone SB Herbicide
359-677	Butoxone Herbicide
359-583	Rhodia 2,4-DB Isooctyl Ester Technical
359-589	Rhodia 2,4-DB Acid Technical
359-668	Rhodia 2,4-DB Butyl Ester Technical

This letter authorizes the transfer of the trademark Butoxone® to Vertac Chemical Corporation but does not authorize the transfer of the trademark Rhodia® to Vertac Chemical Corporation.

This transfer is brought about by the sale of the above labels with the following agreement:

Rhone-Poulenc Inc., Agrochemical Division, P.O. Box 125, Monmouth Junction, New Jersey, 08852 for the sum of \$1.00 and other good and valuable considerations; hereby sells the above labels to Vertac Chemical Corporation, 5100 Poplar Avenue, Memphis, Tennessee, 38187.



ADEQ0018350

Please send all label and registration correspondence on the above labels to the new owner.

Sincerely,

RHONE-POULENC INC.
Agrochemical Division

John E. Davies
John E. Davies
Senior Vice-President
General Manager

Subscribed to and sworn before me a
Notary Public this 18th day of *March*, 1983

Deborah Sherwen
DEBORAH SHERWEN
A Notary Public of New Jersey
My Commission Expires *1-9-84*

AGREES TO THE PURCHASE

VERTAC CHEMICAL CORPORATION

C. P. Bomar, Jr.
C. Patrick Bomar Jr.

Subscribed to and sworn before me a
Notary Public this 23 day of *March*, 1983

John F. Szymura
My Commission Expires 12-8-85

State of Tennessee
County Shelby

LAW OFFICES
APPERSON, CRUMP, DUZANE & MAXWELL

26TH FLOOR

100 NORTH MAIN BUILDING
MEMPHIS, TENNESSEE 38103
901/525-1711

EAST OFFICE:

SUITE 100
5524 FORLAR AVENUE
MEMPHIS, TENNESSEE 38120
901/767-8190

CHARLES W. METCALF, 1940-1984
WILLIAM R. METCALF, 1978-1980

JOHN W. APPERSON
CHARLES METCALF CRUMP
JERRE G. DUZANE
JOHN S. MAXWELL, JR.
ALLEN T. MALONE
SAMUEL RUBENSTEIN
GEORGE W. GRIER
PHILIP G. KAMINSKY
ROBERT L. GINKELSRIEL
MICHAEL E. HEWOLEY

CATHERINE H. SKEFOS
STEVEN B. JOHNSON

JOHN MART TODD
OF COUNSEL

March 29, 1983

C
O
P
Y

The Commissioner
Patent and Trademarks Office
Attn: Assignment Branch
Washington, D.C. 20231

Re: Assignment of Trademarks Butoxone® and Butoxone SR®
from Rhone-Poulenc, Inc. to Vertac Chemical Corporation.

Dear Sir:

Enclosed for recordation is an Assignment of the referenced trademarks, U.S. registration nos. 784,227 and 784,229, respectively, from Rhone-Poulenc, Inc. to Vertac Chemical Corporation. Also enclosed is our check in the sum of \$20.00 to cover the recording fee.

Upon recordation, please see that the enclosed Assignment document is returned to me.

Sincerely yours,

Allen T. Malone

ATM/bw

Enclosures

ADEQ0018402



VERTAC CHEMICAL CORPORATION

24th Floor • 5100 Poplar • Memphis, TN 38137 • 901-767-6851

TELEX 83927

March 23, 1983

Mr. Robert M. Verburg
President
Rhone-Poulenc Inc.
P. O. Box 125
Black Horse Lane
Monmouth Junction, New Jersey 08852

Dear Bob:

It was a pleasure meeting with you on Monday for the closing of our Butoxone acquisition. Your staff did an excellent job in finalizing this transaction and preparing the necessary documents for closing. We are excited about the acquisition which I hope will prove to be profitable for Vertac and Rhone-Poulenc for many years.

As we discussed, we are looking for additional acquisitions such as this and will appreciate hearing from you if you become aware of similar opportunities in the future.

Likewise, we are always looking for opportunities to utilize the wealth of custom manufacturing facilities at our three plant sites. I am enclosing a copy of our Vertac brochure which briefly outlines our experience in this area. Ron Cheves is preparing more up-to-date information which he will forward in the near future.

Again, it was a pleasure working with you and your associates, and I hope that we will have additional opportunities to work on projects of mutual interest in the future.

Sincerely yours,

C. P. Bomar, Jr.
President

CPB:ap

Enclosure

cc: Mr. John E. Davies
Mr. Vincent DeFelice
Mr. Ron Cheves

ADEQ0018402



VERTAC CHEMICAL CORPORATION

24th Floor • 5100 Poplar • Memphis, TN 38137 • 901-767-6851

TELEX 53927

November 17, 1982

Mr. John E. Davies
Senior Vice President-
General Manager
Agrochemical Division
Rhone-Poulenc Inc.
Black Horse Lane
P. O. Box 125
Monmouth Junction, New Jersey 08852

Dear Jack:

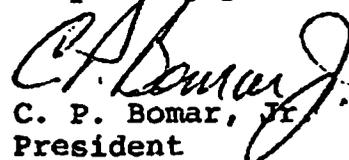
Enclosed is an executed copy of your November 15, 1982, Secrecy Agreement covering BUTOXONE. By returning this agreement, I am indicating Vertac's desire to review the information described in your letter pursuant to making a proposal for the acquisition of Rhone-Poulenc's 2,4-DB related assets. Since I will be out of the country for a period of time, please forward this information to R. A. Guidi, our Vice President of Operations. He will begin evaluating the information, and I will review his comments immediately upon my return.

As we discussed, should such an acquisition be desirable to Vertac, it would be in our mutual interest to finalize this matter as early as possible. Accordingly, it will be my intent to give you a preliminary response and hopefully enter into serious negotiations by mid-December.

If you have specific individuals to whom you would like us to address our technical and/or marketing questions, please indicate this to Ray Guidi.

We appreciate your prompt action on this matter and look forward to discussing it with you further in the near future.

Very truly yours,


C. P. Bomar, Jr.
President

CPB:ap

Enclosure

cc: Mr. R. A. Guidi
Vice President-Operations
Mr. W. C. Keese
Vice President-Agricultural Chemicals

ADEQ0018402



INTERNAL CORRESPONDENCE

DATE: November 3, 1982

CONFIDENTIAL

TO: Rhone-Poulenc File

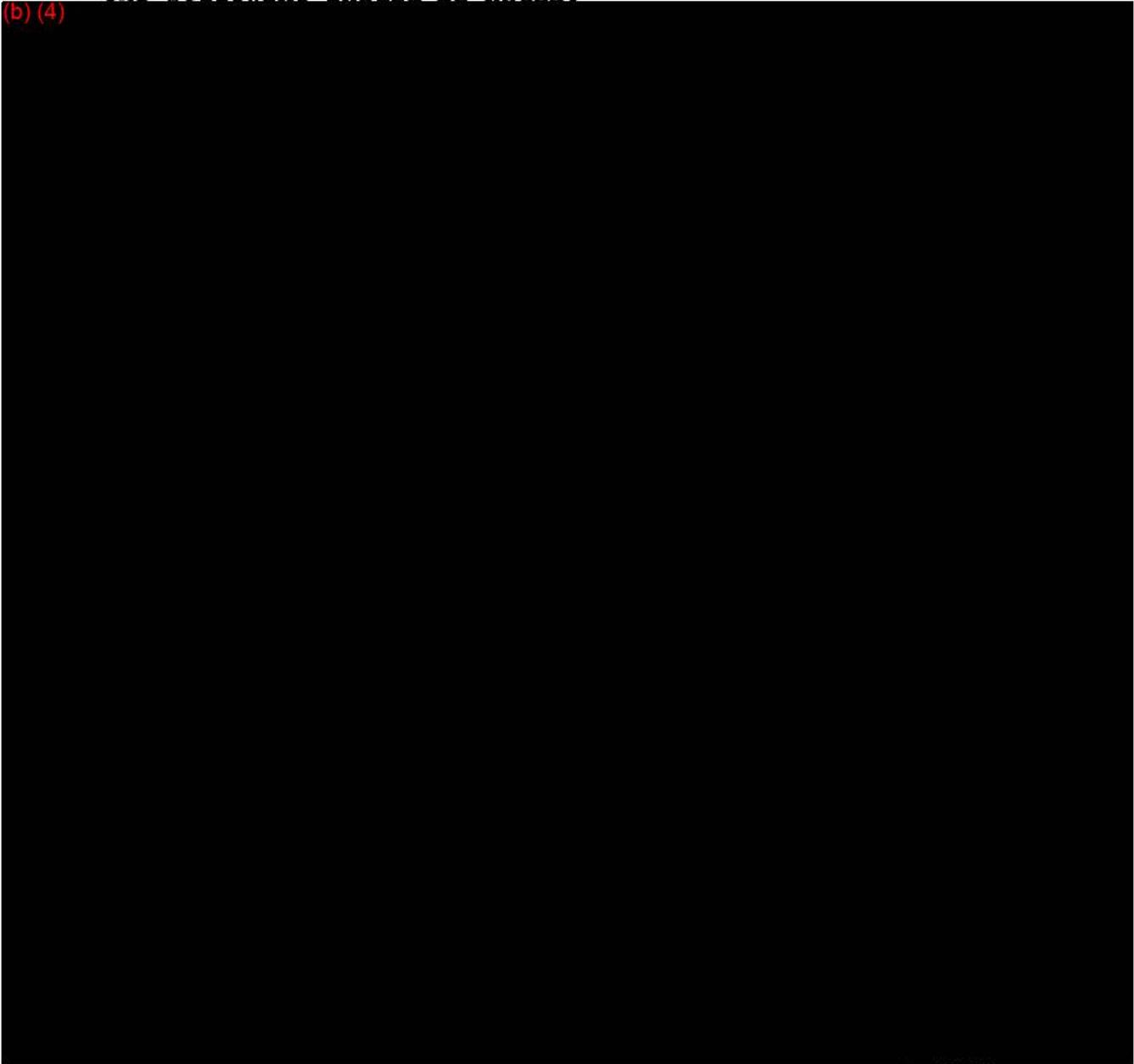
FROM: C. P. Bomar, Jr.

CC: W. C. Keese

SUBJECT: 2,4-D Ester Exchange -
2,4-DB Acquisition

Per my conversation of October 29, 1982, with Jack Davies,
the following should be noted:

(b) (4)



CPB:ap

CPB

ADEQ0018402

RHÔNE-POULENC INC.
AGROCHEMICAL DIVISION

PO Box 125 - Black Horse Lane - Monmouth Junction, New Jersey 08852 - Telephone: (201) 297-0100 - Telex: 844527

May 16, 1983
MAM/83/139

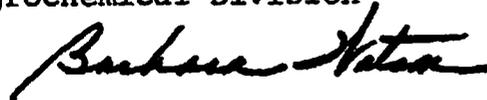
Mr. C. P. Bomar Jr.
Vertac Chemical Corp.
5100 Poplar Avenue, Clark Towers
24th Floor, Suite 2414
Memphis, Tennessee 39837

Dear Mr. Bomar:

Enclosed is some additional 2,4-DB correspondence that was inadvertently forgotten to be shipped to you.

Sincerely,

RHONE-POULENC INC.
Agrochemical Division



Barbara Watson, Secretary to
Margaret A. McMullen
Registration Specialist

MAM/BJW

Enclosures included the following:

Draft copy of Petition Proposing a Tolerance for 2,4-DB for use in Oat Production.

Manila file labeled "IR-4 2,4-DB on Radishes."

The above turned over to Mr. Fisher as received.
ap 5-26-83



ADEQ0018394

Carton addressed to Mr. Bomar was received from Rhone-Poulenc on April 23, 1983, containing the following files:

1. 2,4-DB Complaints
2. 2,4-DB Data Call-In
3. 2,4-DB EPA Correspondence
4. 2,4-DB Clover (IR-4)
5. 2,4-DB Fish & Wildlife
6. 2,4-DB Methodology
7. 2,4-DB Performance
8. 2,4-DB Product Chemistry
9. 2,4-DB Residue Chemistry
10. 2,4-DB Toxicology
11. 2,4-DB Mint (IR-4) Submission
12. 2,4-DB Pasture Grasses (IR-4)
13. 2,4-DB Acid Tech (Labels)
14. 2,4-DB Butyl Ester Tech (Labels)
15. 2,4-DB Isooctyl Tech (Labels)
16. Butoxones (All) - Petition information from product files
17. Butoxone (Labels)
18. Butoxone Amine (Labels)
19. Butoxone Ester (Labels)
20. Butoxone SB (Labels)

All files were turned over to J. R. Fisher as received.

ap



5-20-83

RHÔNE-POULENC INC.
AGROCHEMICAL DIVISION

P.O. Box 125 - Black Horse Lane - Monmouth Junction, New Jersey 08852 - Telephone. (201) 297-0100 - Telex: 844527

May 3, 1983
SJH/83/052

Mr. C. P. Bomar Jr.
Vertac Chemical Corp.
5100 Poplar Avenue, Clark Towers
24th Floor, Suite 2414
Memphis, Tennessee 39837

Dear Mr. Bomar:

Enclosed please find two copies of each of the final reports listed below. These are the reports for the studies which Ms. Margaret A. McMullen had promised would be sent to you.

- * WIL - 21002, 21003, 21004, 21005 Acute Oral, Dermal, Eye and Primary Skin with Butoxone.
- * WIL - 21006, 21007, 21008, 21009 Acute Oral, Dermal, Eye and Primary Skin with Butoxone Ester.

Sincerely,

RHONE-POULENC INC.
Agrochemical Division

Suzanne J. Hamburger
Suzanne J. Hamburger, Ph.D.
Hazard Evaluation Scientist

SJH/bjw
enclosures

*Wil Research Laboratories, Inc.

All copies turned over to J. R. Fisher as received.
5-26-83 ap

SJH 26 MAY 83



ADEQ0018394

Carton addressed to Mr. Bomar was received from Rhone-Poulenc on April 23, 1983, containing the following notebooks:

1. Petition for the Establishment of Tolerances for the Pesticide Chemical 4-(2,4-Dichlorophenoxy) butyric acid on Raw Agricultural Commodities. (Rhodia Inc.) - 2,4-DB Pesticide Petition No. 1F1089
 - A. Book I - Sections A, B, and part of C
 - B. Book II - End of Section C
 - C. Book III - Section D
 - D. Book IV - Sections E, F, and G
2. Substantive Amendment - Pesticide Petition No. 1F1089
3. Efficacy Data Addendum - Pesticide Petition No. 1F1089 (2,4-DB on Peanuts)
4. 2,4-DB Petition Rough Draft
5. FDA Correspondence and USDA Correspondence - 2,4-DB Pesticide Petition No. 1F1089
6. Summary of Program to Clear the Use of 2,4-DB on Alfalfa and Certain Other Small Seeded Legumes & Peas Grown for Food & Fodder & To Market Same in the USA (May 23, 1961).
7. Proposal to obtain data necessary for the establishment of a negligible residue petition on alfalfa and soybeans for 4-(2,4-dichlorophenoxy)-butyric acid (10-28-68).
8. Butoxone - EPA Reg. No. 359-677, June 19, 1978 - Results of N-Nitroso Contaminant Analysis (Rhodia Inc.)
9. Efficacy Data for Peanuts and Soybeans (2 copies)
 - Butoxone Amine - USDA Reg. No. 359-358
 - Butoxone Ester - USDA Reg. No. 349-409
 - Butoxone SB - USDA Reg. No. 359-502
10. Additional Support Data for Weed Control and Peanut Tolerance with Butyrac 175 (Amchem Products, Inc., April 19, 1973).

All files were turned over to J. R. Fisher as received.

ap



24 MAY 83

RECEIPT FOR CERTIFIED MAIL—30¢ (plus postage)

No. 870638

SENT TO Attn: Lela Sykes		POSTMARK OR DATE
Process Coordination Branch(3)		22202 3-23-83
Registration Division (TS-767c)		
Office of Pesticide Programs		
Environmental Protection Agency		
Crystal Mail Bldg. #2, Rm 1120		
Jefferson Davis Hwy, Arlington, VA		
OPTIONAL SERVICES FOR ADDITIONAL FEES		
RETURN RECEIPT SERVICES	1. Shows to whom and date delivered 15¢ With restricted delivery 65¢ 2. Shows to whom, date and where delivered .. 35¢ With restricted delivery 85¢	
RESTRICTED DELIVERY		50¢
SPECIAL DELIVERY (extra fee required)		

PS Form 3800
Aug. 1975

NO INSURANCE COVERAGE PROVIDED—
NOT FOR INTERNATIONAL MAIL

(See other side)

☆ GPO: 1975-O-691-452



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

MAY 23 1983

The original of this letter is located in the Reg. Lib. EPA Registration Transfer

OFFICE OF PESTICIDES AND TOXIC SUBSTANCES

RECEIVED

Mr. J. R. Fisher
Vertac Chemical Corp.
5100 Poplar
24th Floor
Memphis, TN 38137

MAY 27 1983

VERTAC CHE

Gentlemen:

Subject: Transfer of Registrations from
Company Number 359 to 39511

Pursuant to your request in your letter of March 23, 1983 and Rhone Poulenc Inc.'s letter of March 16, 1983 we are transferring the following registrations from Rhone Poulenc Inc. P.O. Box 125 Monmouth Junction, NJ 08852 company number 359 to Vertac Chemical Corp. 5100 Poplar, Memphis, TN 38137 company number 39511.

The effective date of these changes is May 18, 1983.

<u>Registered Products</u>	<u>Old EPA Reg. No.</u>	<u>New EPA Reg. No.</u>
Butoxone Amine Herbicide	359#358	39511#117
Butoxone Ester	359#409	39511#118
Butoxone SB Herbicide	359#502	39511#119
2,4-DB Isooctyl Ester Technical	359#583	39511#120
2,4-DB Acid Technical	359#589	39511#121
Butoxone Herbicide	359#677	39511#122
2,4-DB Butyl Ester Technical	359#668	39511#123

On the basis of information furnished, the above named products are hereby registered under the Federal Insecticide, Fungicide, and Rodenticide Act, as amended (FIFRA). The effective date of issuance of the New EPA Reg. No. is May 18, 1983. You should indicate the new company designation and new EPA Reg. No. on the label at the next printing. It will not be necessary to submit labeling for review if the only changes are in the company designation and the EPA Reg. No.

Changes in labeling or formula differing in substance from that Accepted in connection with this registration must be submitted to and accepted by the Registration Division prior to use of the label in commerce. In any correspondence on this product always refer to the above U. S. EPA Registration Number.

If you plan to change your source of supply for the active ingredients in your product, please notify this Agency by sending us a revised Confidential Statement of Formula. This statement must include among other items, the name and address of the new supplier and the EPA Registration Number for the new source.

Registration is in no way to be construed as an endorsement or approval of this product by this Agency. In order to protect health and the environment, the Administrator, on his motion, may at any time suspend or cancel the registration of a pesticide in accordance with FIFRA.

By copy of this letter we are also informing Rhone Poulenc Inc. of these changes.

Sincerely,



Art Donner, Section Head
Registration Support and
Emergency Response Branch

cc: Rhone Poulenc Inc.

RHÔNE-POULENC INC.
AGROCHEMICAL DIVISION

P.O. Box 125 - Black Horse Lane - Monmouth Junction, New Jersey 08852 - Telephone: (201) 297-0100 - Telex: 844527

September 26, 1983

JRF
Please handle
EM

[Handwritten signature]

Mr. P. Bowmar, President
Vertac Chemical Corp.
5100 Poplar
24th floor
Memphis, TN 38137

Dear Mr. Bowmar:

For your information and use I have enclosed a list of the states where we have had the 2,4-DB (Butoxone) products registered for 1983.

Since you purchased our inventory may I suggest you register the 359-xxx, Rhone-Poulenc Inc. products as discontinued for the 1984 registration year. I registered the products as discontinued for the June registrations (July 1, 1983 thru June 30, 1984); these states indicated by 'J' on the list.

If you have any questions, please call me at the above number.

Sincerely,

Lynette Waldron
(Mrs.) Lynette Waldron
Senior Registrar

Enclosure

cc: D. Umani
P. McMullen



ADEQ0018400

The 2,4-DB (Butoxone) products were registered in the following states for 1983 by Rhone-Poulenc. Vertac should register as Disc. 1st yr in 1984 to cover sale of Invep.

STATE	Butoxone Amine (359-358)				Butoxone Ester (359-409)				Butoxone SB (359-502)				Butoxone (359-677)			
ALABAMA	D/2															
ARIZONA																
ARKANSAS	✓															
CALIFORNIA																
COLORADO																
CONNECTICUT																
3 DELAWARE		D/1														
FLORIDA	D/2															
GEORGIA	D/2															
GUAM	||															
HAWAII	||															
IDAHO																
ILLINOIS																
INDIANA																
IOWA																
KANSAS																
KENTUCKY																
LOUISIANA	✓															
MAINE	||															
MARYLAND																
3 MASSACHUSETTS		D/1														
3 MICHIGAN	||															
MINNESOTA																
MISSISSIPPI	✓															
MISSOURI																
MONTANA																
NEBRASKA																
NEVADA																
NEW HAMPSHIRE																
NEW JERSEY																
NEW MEXICO	✓															
NEW YORK																
NORTH CAROLINA	✓															
NORTH DAKOTA																
OHIO																
OKLAHOMA	✓															
OREGON																
PENNSYLVANIA																
PUERTO RICO	||															
RHODE ISLAND																
SOUTH CAROLINA	D/2															
SOUTH DAKOTA																
3 TENNESSEE	D/1															
3 TEXAS	✓															
3 UTAH																
VERMONT																
VIRGINIA	✓															
WASHINGTON																
WEST VIRGINIA																
WISCONSIN																
WYOMING																
Distric of Columbia	||															

✓ = renewed '83

D/1 or D/2 = Discontinued 1st or 2nd yr '83

|| = not registered

3 = '83 registratic by R-P ADEQ0018400

(Contract file)

RHÔNE-POULENC INC.

P.O. Box 125 - Black Horse Lane - Monmouth Junction, New Jersey 08852 - Telephone: (201) 297-0100 - Telex: 844482, 844527

November 2, 1983

Mr. C. P. Bomar, Jr.
VERTAC CHEMICAL CORPORATION
24th Floor
5100 Poplar
Memphis, TN 38137

Dear Mr. Bomar:

In connection with the agreement entered into between Vertac Chemical Corporation and Rhone-Poulenc effective as of January 1, 1983, and more specifically Article III - 3.1 of the Agreement, this letter is to inform you that Rhone-Poulenc Inc. sold its St. Joseph, Missouri plant on November 1, 1983.

Sincerely,

RHONE-POULENC INC.



Vincent E. DeFelice
Senior Vice President
General Counsel

VED:das

*Copy to Mr. Malasini
11-9-83*

ah

*copy also in contract file -
R/P concerning possible sale to
Trustee of St. Joseph Plant*



ADEQ0018251

John Miles

Jackie
Lodis
Pace
Porter
Robbins
Satterfield

CEDAR INTERNAL CORRESPONDENCE

August 19, 1986

TO: R. Cheves

FROM: G. L. Pratt

CC: Frank Barry

SUBJECT: July Custom
Manufacturing Report

ICI

Permethrin

Production (lbs. 100% Permethrin equivalent)

	<u>July</u>	<u>YTD</u>
Permethrin	19,066	540,879
Cypermethrin	299,982	1,915,162
Acid Chloride	16,876	135,214
	<u>335,924</u>	<u>2,591,255</u>

Shipments (lbs. as is)

Ending Inventory (lbs. as is)

18,360	Permethrin	110,100
249,115	Cypermethrin	78,500
-0-	Acid Chloride	36,300

Billing

	<u>July</u>	<u>YTD</u>
Base Fee	\$106,539	
Operating Fee (335,924 lbs. X \$0.35)	117,573	
Miscellaneous	8,039	
	<u>\$232,151</u>	\$1,700,050

368,738 gallons of waste shipped to Gibraltar, 14,946 gallons to Cecos, Odessa, Texas.

Targeted Revenue: \$2,273 in 1986 for 9 month operation.

Diphenylcarbonyl Chloride

ICI testing of product from the March trial production run is continuing. First results are imminent.

Action: Continue to monitor ICI tests.

Targeted Revenue: \$150M/Year for less than a month's operation.

Copolymerization

ICI is continuing their analysis of moving some Haloflex production from the U.K. with July as the decision month. Sol Peltz asked Cedar to refine our ballpark estimate of \$175M/month plus or minus \$25M for revenue. The refinement would zero in on 2 - 3 campaigns per year at 600M lb./month, a minimum of 3MM lbs./year for 3 years, and consider the capital amortization for raw material storage, and support equipment for the 3,500 gallon reactor in the DRA unit.

Action: respond to request for refined ballpark estimate.

Targeted Revenue: \$6-900M/year for 3 - 6 month operation.

Lonza

Dale Battin was unable to confirm Lonza's continuing interest in a Unihib project with Cedar. Lonza has reorganized Dale's group and the new management needs at least 60 days to re-evaluate the project. The internal delay we experienced in establishing Vertac/Cedar's interest in the project continues to be costly.

Action: 1. Stay in contact with Dale
2. If Lonza's decision is positive move quickly to set up contact parameters.

Targeted Revenue: \$850M - 1,000M/year for 6-12 month operation.

Alkylation/Chloromethylation

Action: Awaiting secrecy agreement from Lonza.

Targeted Revenue: \$300M/year for 2 month operation.

SCI

The current campaign was completed on July 30 with 501,019 lbs. of Isonox 132 being produced. Total revenue is \$313,137. The modest profit of \$7,600 was as expected based on the need to reprocess the recycle material from SCI and the improvements that have had to be made in the process.

On August 14 the campaign results were discussed with SCI at a meeting in Schenectady. The yield of 85% on PSBP was better than they expected and the low purge rates were well received. However, our IBE usage of 33% over theoretical is twice the overage they consider acceptable. Due to lack of manpower and break-even economics, SCI has not aggressively pursued the development of the Isonox 132 market. Demand for 1987 will be 500,000 lbs. for use mainly in polyols and a small use in PVC. We are to submit a quotation for 1987 to include Cedar taking responsibility for raw material consumption.

Action: Prepare 1987 quote

Targeted Revenue: \$300M in 1986, \$300M in 1987.

Arco

The quats project continues on hold pending resolution of PMN questions.

Action: Continue to monitor Arco progress. Trial batch planned for Ricerca.

Targeted Revenue: \$200M - 1000M/year in first 3 years.

Rhone Poulenc

The campaign for MTPO began on August 8. The first 3 batches meet the 98% product specification and production rate will permit completion of the 33 metric tons of MTPO by mid September. By blending, we should reduce the off specification material from the previous campaign to 5,235 lbs. which may have to be sent to waste disposal.

Action: Monitor production

Targeted Revenue: \$700M in 1986.

Mobil

Project A

The sulfurized diisobutylene project is continuing under development at Mobil, our projected economics having met their criteria.

Action: Periodically check Mobil's progress toward late 1986 commercial scale production trial.

Targeted Revenue: \$120M - 1800M/year over 3+ year contract.

M & T

In a meeting with M & T it was determined that the current custom producer of the antimony/toluene product must give up his plant site by year end, but may relocate. We have offered the potential for improved economics, growth in output, and greater flexibility in scheduling. M & T is evaluating their options with particular regard to any continuing obligation with their current supplier.

Action: Await evaluation of options by M & T.

Targeted Revenue: \$750M+/year.

Pfizer

Our written expression of interest in and equipment availability for Pfizer's project was satisfactory. The three intermediates will require 20 major reactor vessels and 2 centrifuge/dryer systems.

Action: Pfizer will contact us in first quarter 1987.

Dead Sea Bromine

We are awaiting data on a 2MM lb./year bromination process which may provide a base for U.S. production of Dead Sea Bromine products.

Action: Periodic followup.

Air Products

A proposal for project A was submitted during the week of July 28. It was determined that the product is already being made by

another custom manufacturer who had raised his toll fee to 40 cents/lb. which is within our proposal range. We have withdrawn our proposal for the project, as a protest against Air Products' lack of honesty. The possibility of Cedar obtaining the contract under favorable economic terms was unlikely anyway.

Action: Continue to pursue project B which is at the bench scale with a view to participation in scaleup.

Targeted Revenue: Unknown

Hercules

On July 11 we presented a 4 year proposal for Metton production from 3 - 10 MM lbs./year, total revenue of \$780M and a capital investment (borne by Cedar) of \$500M. The proposal was well received and we were asked to consider economics for a 2, and 4 year proposal with higher production rates and with Hercules prepaying the capital. These economics were given verbally to Hercules on July 17. Hercules has estimated \$5MM as the cost of their own 15MM lb./year plant and an ultimate operating cost of 15 cents/lb. Metton.

Action: Await Hercules response to the revised proposal.

Targeted Revenue:	1987	-	\$ 840M
	1988	-	1760
	1989	-	2000
	1990	-	2280

Pennwalt

A proposal to produce di(2-ethylhexyl) tetrabromophthalate was submitted verbally during the week of July 28. Requirements are 1.5MM lb. in 1987 commencing in the first quarter rising to 12MM lbs./year by 1989. A plant visit by Joe Bohlen is scheduled for the week of August 25 to discuss the technology in detail.

Action: Firm proposal by week of September 8.

Targeted Revenue: \$500M/year rising to \$2.5MM/year.



GLP/nm

RHÔNE-POULENC INC.

*John
Clay
John*

P.O. Box 125 - Black Horse Lane - Monmouth Junction, New Jersey 08852 - Telephone (201) 297-0100 - Telex 844527

August 22, 1986

Mr. C. Parker
Cedar Chemical Corp.
Highway 242 South
W. Helena, AR 72390

Dear Charlie:

Enclosed are the following orders, forms, etc. to be used in conjunction with the production of RP 15 and RP 10 at your plant.

1. Copy of letter to G. Pratt, Memphis.
2. Copy of P.O. B6-78582 (original to G. Pratt).
3. Receiving Report sets and Blanket Order Release Forms for raw material orders booked thus far. In each case I have released 1 tank truck for delivery the week of September 8, 1986. Thereafter, you are responsible for releasing the rest of the material on a timely basis for production, with the following exceptions:

3,4-DCBTF I will be issuing additional orders
Meta Cresol for the balance of material required.
Some will be for imported material. As soon as delivery dates are available, you will be notified so you can schedule domestic shipments around the import containers as they have to be returned to the pier promptly.

Also, I am stock transferring 22 drums, 10,030 lbs. of DCBTF from Mt. Pleasant, TN.

DMAC After the 1st tank truck of virgin material, we will supply a car of mixed product, the analysis of which is:

DMAC	86.4%	66,727 lbs.
m-Cresol	1.7%	1,313 lbs.
RP 15	2.4%	1,853 lbs.
DCBTF	2.2%	1,700 LBS.
water	5.0%	N/A

When this material is needed, please advise me, and I will arrange for the stock transfer.



ADEQ0021190

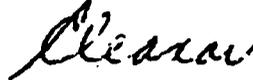
As far as making releases on the KOH, I would appreciate it if you would try to alternate back and forth between the 2 sources.

4. Reporting Procedure: This is our standard procedure with contract manufacturers that details how the different receiving reports, production reports, etc. are to be prepared, as well as the applicable mailing addresses.

Please bear in mind that none of my suppliers are aware of who my other sources are, the total quantities purchased, what per cent of the business they or anyone else has, etc. I will depend on you to see to it that no one at Cedar will divulge any such information. All inquiries beyond shipping data are to be referred to me.

Very truly yours,

RHONE POULENC, INC.



E. Schroder
Purchasing Agent

ES/sg

c/c: G. Pratt Memphis, TN

P.S. Also enclosed are specifications and MSDS for the raw materials.

RHÔNE-POULENC INC.

P.O. Box 125 - Black Horse Lane - Monmouth Junction, New Jersey 08852 - Telephone: (201) 297-0100 - Teleg: 844527

August 25, 1986

Mr. Geoffrey L. Pratt
Cedar Chemical Corp.
5100 Poplar
Suite 2414
Memphis, TN 38137

Dear Geof:

Enclosed is our Purchase Order No. B6-78582 which covers the 2 production stages, RP 15 scheduled to start up between September 15 and October 1, 1986 and RP 10 scheduled to start up between January 1-15, 1987.

The following data is being sent direct to Charlie Parker in W. Helena, AR.

1. Copy of above order.
2. Receiving Report sets for raw materials currently on order. Additional orders will be issued shortly.
3. Reporting Procedure and forms.

Please let me know if there are any questions regarding the above.

Very truly yours,

RHONE POULENC, INC.



E. Schroder
Purchasing Agent

ES/sg
c/c: C. Parker, W. Helena, AR ✓

CC: John Miles
Mark Robbins
Tom Lohio
Clay Duce



ADEQ0017606



ORDER SUBJECT TO SALES OR USE TAX	VENDOR NO	QTY	DATE	NUMBER
<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO		8	8/22/86	86-78582
SEE BELOW		THE ABOVE ORDER NUMBER MUST APPEAR ON ALL CONTAINERS, PACKAGES AND SHIPPING DOCUMENTS BY TARIFF AND CROSS COUNTRY TO APPEAR ON EVERY CONTAINER		

DIVISION _____ CORP. ADMIN. _____

TO Cedar Chemical Co.
Memphis, TN.

- S
H
I
P
T
O
1. FREEPORT, TX. 77841 - 6213 Hwy. 332 E.
 2. LAKEWOOD, N.J. 08701 - 1145 TOWBIN AVE.
 3. LAKEWOOD, N.J. 08701 - 1689 CORPORATE RD. WEST
 4. NEW BRUNSWICK, N.J. 08903 - 297 JERSEY AVE.
 5. ST. JOSEPH, MO. 64504 - PACKERS AVE.
 6. PORTLAND, OR. 97210 - 8200 N.W. ST. HELENS RD.
 7. _____
 8. MONMOUTH JUNCTION, N.J. 08852 - BLACK HORSE LANE
 9. NEW YORK, N.Y. 10017 - 52 VANDERBILT AVE.
 10. NEW BRUNSWICK, N.J. 08903 - 120 JERSEY AVE.
 11. _____
 12. _____

CONFIRMING TO: _____ ON _____

DATE REQUIRED AT DESTINATION			SHIP VIA	ROUTE	MARKS TO APPEAR ON ALL INVOICES, CONTAINERS AND SHIPPING DOCUMENTS	TERMS
PPD	COLL	ADD	ALLOWED	F.O.B.		1. NET 15 DAYS 2. 15 TO 30 DAYS 3. 30 TO 45 DAYS 4. 45 TO 60 DAYS 5. 60 TO 90 DAYS 6. NET 10 DAYS 7. NET 30 DAYS 8. (SPECIFY, IF OTHER SEE BELOW).
QTY. ORDERED	PRODUCT CODE OR PROJECT NO.	DESCRIPTION			UNIT PRICE	TOTAL COST
1		Tolling Charges contd.				
SEND FREIGHT BILL TO: Rhone-Poulenc Inc. P.O. Box 125 Monmouth Junction, N.J. 08852 Att: Traffic Dept.						
This order relates to Letter of Agreement dated August 1, 1986.						
Customer's Order No.		Supplier's Order No.		Import License:	Export License:	

• INVOICE IN DUPLICATE

• PLEASE ACKNOWLEDGE ALL ORDERS

• THIS PURCHASE ORDER IS SUBJECT TO THE TERMS AND CONDITIONS AND INSTRUCTIONS APPEARING ON THE FACE AND REVERSE SIDE HEREOF.

BILL TO: RHONE-POULENC INC.
P.O. BOX 2009
NEW BRUNSWICK, N.J. 08903

RHONE-POULENC INC.
P.O. BOX 125
MONMOUTH JUNCTION, N.J. 08852

RHONE-POULENC INC.
BY *J. Schroder* E. Schroder
PURCHASING AGENT

RA 39 5/81

VENDOR'S COPY

ADEQ0017606

RHÔNE-POULENC INC.

P O Box 125 - Black Horse Lane - Monmouth Junction, New Jersey 08852 - Telephone: (201) 297-0100 - Telex: 844527

August 25, 1986

Mr. Geoffrey L. Pratt
Cedar Chemical Corp.
5100 Poplar
Suite 2414
Memphis, TN 38137

Dear Geof:

Enclosed is our Purchase Order No. B6-78582 which covers the 2 production stages, RP 15 scheduled to start up between September 15 and October 1, 1986 and RP 10 scheduled to start up between January 1-15, 1987.

The following data is being sent direct to Charlie Parker in W. Helena, AR.

1. Copy of above order.
2. Receiving Report sets for raw materials currently on order. Additional orders will be issued shortly.
3. Reporting Procedure and forms.

Please let me know if there are any questions regarding the above.

Very truly yours,

RHONE POULENC, INC.



E. Schroder
Purchasing Agent

ES/sg
c/c: C. Parker, W. Helena, AR ✓

CC: John Miles
Mark Robbins
Tom Luchie
Clay Pace



ADEQ0021202



DIVISION

CORP. ADMIN.

CEDAR CHEMICAL CO.
 5100 Poplar
 TO Suite 2414
 Memphis, TN. 38137

ORDER SUBJECT TO SALES OR USE TAX	VENDOR NO	QTY'S	DATE	NUMBER
<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO		8	8/22/86	86-78582
SEE BELOW			THE ABOVE ORDER NUMBER MUST APPEAR ON ALL CONTAINERS, PACKETS AND SHIPPING DOCUMENTS NET TARE AND GROSS WEIGHTS TO APPEAR ON EVERY CONTAINER	
B	S	1. FREEPORT, TX. 77541 - 6213 HWY. 332 E.		
I	H	2. ROCHESTER, N.Y. 14613 - 1000 DRIVING PARK AVE.		
L	I	3. LAKEWOOD, N.J. 08701 - 1669 CORPORATE RD. WEST		
L	P	4. NEW BRUNSWICK, N.J. 08903 - 298 JERSEY AVE.		
T	T	5. NEWTON, N.J. 07800 - 10 PATERSON AVE.		
O	O	6. PORTLAND, OR. 97210 - 6200 N.W. ST. HELENS RD		
		7. MT. PLEASANT, TN. 38474 - ARROW MINES ROAD		
		8. MONMOUTH JUNCTION, N.J. 08852 - BLACK HORSE LANE		
		9. NEW YORK, N.Y. 10017 - 52 VANDERBILT AVE.		
		10. NEW BRUNSWICK, N.J. 08903 - 120 JERSEY AVE.		
		11. WILLIAMSTOWN, MA. 01267 - 330 COLE AVE		
		12. MONMOUTH JUNCTION, N.J. 08852 P.O. BOX 125		
		13. NEW BRUNSWICK, N.J. 08903 P.O. BOX 2009		
		14. SEE BELOW		
		15.		

CONFIRMING TO: Geoffrey L. Pratt ON

DATE REQUIRED AT DESTINATION	SHIP VIA	ROUTE	MARKS TO APPEAR ON ALL INVOICES CONTAINERS AND SHIPPING DOCUMENTS	TERMS	
AS RELEASED	TO BE ADVISED		P.O. #86-78582	5 1 NET 10 DAYS 2 NET 15 DAYS 3 NET 20 DAYS 4 NET 30 DAYS 5 OTHER (SPECIFY BELOW)	
PPD	COLL	ADD	ALLOWED	F.O.B.	
	X			W. HELENA, AR.	
ITEM	QTY ORDERED	PRODUCT CODE OR PROJECT NO	DESCRIPTION	UNIT PRICE	TOTAL COST
1	684,000 lbs.	9-5391-00	TOLLING CHARGES RP-15-START UP between 9/15-10/1/86.		\$435,000.00
	140,000 lbs.			\$.35/lb.	49,000.00
	Approx. 116,000 lbs.		Estimated 11.6 days Prorated @ \$175,000/mo Estimated		67,667.00
	340,000		Coordinate shipments with Don Bertling, Freeport, TX. (409-233-7871)		
2	600,000 lbs.	9-5394-00	RP-10		550,000.00
	Approx. 100,000 lbs.			\$.35/lb.	35,000.00
		SHIP TO:	TO BE ADVISED		
	01	2468	19125		

- PLEASE ACKNOWLEDGE ALL ORDERS
- INVOICE IN DUPLICATE 1 of 2
- THIS PURCHASE ORDER IS SUBJECT TO THE TERMS AND CONDITIONS AND INSTRUCTIONS APPEARING ON THE FACE AND REVERSE SIDE HEREOF.

RHONE-POULENC INC.
 BY *J. Schroder* J.E. Schroder
 PURCHASING AGENT

RA 39 9/84

VENDOR'S COPY

ADEQ0021202



ORDER SUBJECT TO SALES OR USE TAX	VENDOR NO	DATE	NUMBER
<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	8	8/22/86	B6-78582
SEE BELOW		THE ABOVE ORDER NUMBER MUST APPEAR ON ALL CONTAINERS, INVOICES AND SHIPPING DOCUMENTS BY TARE AND GROSS WEIGHTS TO APPEAR ON EVERY CONTAINER	

DIVISION CORP. ADMIN.

TO Cedar Chemical Co.
Memphis, TN.

- 1. FREEPORT, TX. 77641 - 6213 Hwy. 332 E.
- 2. LAKEWOOD, N.J. 08701 - 1145 TOWBIN AVE.
- 3. LAKEWOOD, N.J. 08701 - 1669 CORPORATE RD. WEST
- 4. NEW BRUNSWICK, N.J. 08903 - 297 JERSEY AVE.
- 5. ST. JOSEPH, MO. 64504 - PACKERS AVE.
- 6. PORTLAND, OR. 97210 - 8200 N.W. ST. HELENS RD.
- 7.
- 8. MONMOUTH JUNCTION, N.J. 08852 - BLACK HORSE LANE
- 9. NEW YORK, N.Y. 10017 - 62 VANDERBILT AVE.
- 10. NEW BRUNSWICK, N.J. 08903 - 120 JERSEY AVE.
- 11.
- 12.

CONFIRMING TO:

ON

DATE REQUIRED AT DESTINATION			SHIP VIA	ROUTE	MARKS TO APPEAR ON ALL INVOICES, CONTAINERS AND SHIPPING DOCUMENTS	TERMS
PPD	COLL	ADD	ALLOWED	F.O.B.		1. NET 10 DAYS 2. 1% 10 DAYS 3. 2% 10 DAYS 4. 1% 10% PROX 5. 2% 10% PROX 6. NET 10 DAYS 7. NET 30 DAYS <input type="checkbox"/> 8. (SPECIFY, IF OTHER SEE BELOW).
QTY. ORDERED	PRODUCT CODE OR PROJECT NO.	DESCRIPTION	UNIT PRICE	TOTAL COST		
1		Tolling Charges contd.				
SEND FREIGHT BILL TO: Rhone-Poulenc Inc. P.O. Box 125 Monmouth Junction, N.J. 08852 Att: Traffic Dept.						
This order relates to Letter of Agreement dated August 1, 1986.						
Customer's Order No.		Supplier's Order No.		Import License:	Export License:	

- INVOICE IN DUPLICATE
- PLEASE ACKNOWLEDGE ALL ORDERS 2 of 2
- THIS PURCHASE ORDER IS SUBJECT TO THE TERMS AND CONDITIONS AND INSTRUCTIONS APPEARING ON THE FACE AND REVERSE SIDE HEREOF.

BILL TO: RHONE-POULENC INC.
 P.O. BOX 2009
 NEW BRUNSWICK, N.J. 08903

RHONE-POULENC INC.
 P.O. BOX 125
 MONMOUTH JUNCTION, N.J. 08852

BY J. Schroder **J.E. Schroder**
 PURCHASING AGENT

RA 39 5/81

VENDOR'S COPY

RHÔNE-POULENC INC.

P O Box 125 - Black Horse Lane - Monmouth Junction, New Jersey 08852 - Telephone (201) 297-0100 FAX 844527

John Joel Hug
Clay Tom

September 5, 1986

Mr. Charlie Parker
Cedar Chemical Corp.
Highway 242 South
W. Helena, AR 72390

Dear Charlie:

With regard to the current campaign to produce RP-15, attached are receiving reports for the 2 orders issued thus far for Meta Cresol. It is anticipated a 3rd order will be issued shortly to cover the balance of the requirement.

Very truly yours,

RHONE POULENC, INC.

E. Schroder

E. Schroder
Purchasing Agent

ES/sg

Deliver To L.P.S Cedar Chem. Corp. N. Helena, AR	Building	Room	Registration AB
--	----------	------	---------------------------



DIVISION

CORP. ADMIN.

TO **MERICHEN CO.
4800 Texas Commerce Tower
Houston, TX. 77002**

PURCHASE ORDER			
<input type="checkbox"/> YES	<input checked="" type="checkbox"/> DEPO	8	8/21/86
SEE BELOW		86-78579	

B	1. FREEPORT, TX. 77541 - 6213 HWY. 332 E.
	2. ROCHESTER, N.Y. 14813 - 1000 DRIVING PARK AVE.
	3. LAKEWOOD, N.J. 08701 - 1889 CORPORATE RD. WEST
	4. NEW BRUNSWICK, N.J. 08903 - 298 JERSEY AVE.
	5. NEWTON, N.J. 07600 - 10 PATERSON AVE.
	6. PORTLAND, OR. 97210 - 6200 N.W. ST. HELENS RD.
	7. MT. PLEASANT, TN. 38474 - ARROW MINES ROAD
	8. MONMOUTH JUNCTION, N.J. 08852 - BLACK HORSE LANE
	9. NEW YORK, N.Y. 10017 - 82 VANDERSILT AVE.
	10. NEW BRUNSWICK, N.J. 08903 - 120 JERSEY AVE.
	11. WILLIAMSTOWN, MA. 01267 - 330 COLE AVE.
	12. MONMOUTH JUNCTION, N.J. 08852 P.O. BOX 125
	13. NEW BRUNSWICK, N.J. 08903 P.O. BOX 2009
	14. SEE BELOW
	15. SEE BELOW

CONFIRMING TO:

Ann Lee

ON

DATE RECEIVED AT DESTINATION	SHIP VIA	ROUTE	MARKS TO APPEAR ON ALL BUNDLES, CONTAINERS AND CARTON DOCUMENTS	TERMS
SEE BELOW	TANK TRUCK-W/11	or Transportors (713-457-6348/9)	P.O. 86-78579	1 1/25 10 DAYS 2 15 10 DAYS 3 25 10 DAYS 4 NET 10 DAYS 5 NET 30 DAYS 6 OTHER (SPECIFY BELOW)
PPD	COLL	ADD	ALLOWED	T.O.B.
	K			HOUSTON TX.
RELEASE NO.				

ITEM	QTY. ORDERED	PRODUCT CODE OR PROJECT NO.	DESCRIPTION
1	Approx. 200,000 lbs.	9-1250-00	META CRESOL 99% Mta.
First shipment to ARRIVE west of 9/2/86.			
All other Releases to be made by Charlie Parker, Cedar Chem. Corp. (801-572-3701) Merichen Customer Service contact Ann Lee (800-231-3000)			
NOTE: Tank trucks are to be equipped with 2 sections of lined hoses and are to be pressurized or have pumps			
SHIP TO: Rhone-Poulenc Inc. 3 Cedar Chemical Corp. Highway 342 South West Helena, AR. 72399			
CERTIFICATE OF ANALYSIS required on all shipments. Send to attn. Quality Control Mgr. at receiving location.			

01	2000	19913							
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Item	Date	Receiving Report No.	Qty. Rcvd.	Balance Due	Slp.	Item	Date	Receiving Report No.	Qty. Rcvd.	Balance Due	Slp.
				1 of 2							

Order To R.P. Cedar Chemical Corp., West Helena, AR.	Building	Room	Requester AB
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DIVISION COMP. AMER.

TO **LCP Chemicals & Plastics Inc.
Baritan Plaza II
Baritan Center
Edison, N.J. 08837**

PURCHASE ORDER

<input type="checkbox"/> YES	<input checked="" type="checkbox"/> NO	8	2/21/86	84-78581
SHIP TO		SEE BELOW		
B	S	1. FREEPORT, TX. 77841 - 6213 HWY. 332 E.		
I	H	2. ROCHESTER, N.Y. 14613 - 1000 DRIVING PARK AVE.		
L	I	3. LAKEWOOD, N.J. 08701 - 1669 CORPORATE RD. WEST		
T	P	4. NEW BRUNSWICK, N.J. 08903 - 298 JERSEY AVE.		
O	T	5. NEWTON, N.J. 07800 - 10 PATERSON AVE.		
	O	6. PORTLAND, OR. 97210 - 8200 N.W. ST. HELENS RD.		
		7. MT. PLEASANT, TN. 38474 - ARROW MINES RD.		
		8. MONMOUTH JUNCTION, N.J. 08852 - BLACK HORSE LANE		
		9. NEW YORK, N.Y. 10017 - 52 VANDERBILT AVE.		
		10. NEW BRUNSWICK, N.J. 08903 - 120 JERSEY AVE.		
		11. WILLIAMSTOWN, MA. 01267 - 330 COLE AVE.		
		12. MONMOUTH JUNCTION, N.J. 08852 P.O. BOX 125		
		13. NEW BRUNSWICK, N.J. 08903 P.O. BOX 2009		
		14. SEE BELOW		
		15. SEE BELOW		

CONFIRMING TO: **Victor Edwards** ON **2/18/86**

DATE REQUIRED AT DESTINATION	SHIP VIA	ROUTE	TERMS TO APPEAR ON ALL ORDERS, CONTRACTS AND SHIPPING DOCUMENTS	TERMS
AS RELEASED	TANK TRUCKS		P.O. 84-78581	5
PPF	COLL	ADD	Release No.	1 NET 10 DAYS 2 NET 15 DAYS 3 NET 30 DAYS 4 OTHER (SPECIFY BELOW)
	X		S.P. freight equalized with MUSCLE SHOALS, AL.	

ITEM	QTY ORDERED	PRODUCT CODE OR PRODUCT NO.	DESCRIPTION
1	Approx. 250,000 lbs.	9-1190-00	CAUSTIC POTASH 45% LIQUID
<p>Releases to be made by Charlie Parker, Cedar Chem. Corp (501-572-3701) LCP Customer Service (800-492-5082)</p> <p>NOTE: Tank trucks are to be equipped with 2 sections of lined hoses and are to be pressurized or have pump</p> <p>CERTIFICATES OF ANALYSIS required on all shipments.</p> <p>Send to Attn. Quality Control Mgr. at receiving location</p> <p>SHIP TO: Rhone-Poulenc Inc. 3 Cedar Chemical Corp. Highway 242 South West Helena, AR. 72390</p> <p>FREIGHT/BILLS TO BE SENT TO: Rhone-Poulenc Inc. P.O. Box 125 Monmouth Junction, N.J. 08852 Attn: Traffic Dept.</p>			

01	2460	19811					
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Item	Date	Receiving Report No.	Qty. Rcvd.	Balance Due	Slip	Item	Date	Receiving Report No.	Qty. Rcvd.	Balance Due	Slip

Deliver To L.P.S CIDER CHEM. CORP. N. WELLS, AR.	Building	Room	Requisitioner AS
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DIVISION COOP. ADMIN.

CHATEAUX INDUSTRIES INC.
2701 Channel Avenue
TO Memphis, TN. 38113

PURCHASE ORDER

DATE ORDERED <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	INVOICE NO.	DATE	NUMBER
		8/21/86	86-78578
TERMS		SEE BELOW	
THE ABOVE ORDER NUMBER MUST APPEAR ON ALL CONFIRMATIONS, INVOICES AND SHIPPING DOCUMENTS. NET 15 DAYS FOR SHIPMENTS TO APPEAR ON INVOICE DOCUMENTS.			
B	S	1. FREEPORT, TX. 77541 - 6213 HWY. 332 E. 2. ROCHESTER, N.Y. 14613 - 1000 DRIVING PARK AVE. 3. LAKEWOOD, N.J. 08701 - 1688 CORPORATE RD. WEST 4. NEW BRUNSWICK, N.J. 08903 - 288 JERSEY AVE. 5. NEWTON, N.J. 07800 - 10 PATERSON AVE. 6. PORTLAND, OR. 97210 - 6200 N.W. ST. HELENS RD. 7. MT. PLEASANT, TN. 38474 - ARROW MINES ROAD 8. MONMOUTH JUNCTION, N.J. 08852 - BLACK HORSE LANE 9. NEW YORK, N.Y. 10017 - 82 VANDERBILT AVE. 10. NEW BRUNSWICK, N.J. 08903 - 120 JERSEY AVE. 11. WILLIAMSTOWN, MA. 01267 - 330 COLE AVE. 12. MONMOUTH JUNCTION, N.J. 08852 P.O. BOX 125 13. NEW BRUNSWICK, N.J. 08903 P.O. BOX 2009 14. SEE BELOW 15.	

CONFIRMING TO: H. Ray Jones ON 8/21/86

DATE REQUIRED AT DESTINATION	SHIP VIA	ROUTE	MARKS TO APPEAR ON ALL INVOICES, CONTAINERS AND SHIPPING DOCUMENTS	TERMS
AS RELEASED	TANK TRUCK		P.O. 86-78578 Release No.	<input type="checkbox"/> 1/15 10 DAYS <input type="checkbox"/> 2/15 10 DAYS <input type="checkbox"/> 3/15 10 DAYS <input type="checkbox"/> 4/15 10 DAYS <input type="checkbox"/> 5/15 10 DAYS <input type="checkbox"/> OTHER (SPECIFY BELOW)
PPG	COLL	ADD	ALLOWED	F.O.B.
<input checked="" type="checkbox"/>				
S.P. Freight equal with MUSCLE SHOALS, AL				

ITEM	QTY. ORDERED	PRODUCT CODE OR PROJECT NO.	DESCRIPTION
1	Approx. 250,000 lbs.	9-1100-00	CAUSTIC POTASH 45% LIQUID
			1st shipment to arrive week of 9/8/86.
			All further releases to be made by Charlie Parker, Cedar Chemical Corp. (501-572-3701) Chemtech Customer Service 901-775-2100
			NOTE: Tank trucks are to be equipped with 2 sections of lined hoses and are to be pressurized or have pumps. CERTIFICATES OF ANALYSIS: required on all shipments. Send to AEC Quality Control Mgr. at receiving location. FREIGHT BILLS TO BE SENT TO:
			Rhone-Poulenc Inc. P.O. Box 125 Monmouth Junction, N.J. 08852 Attn: Traffic Dept.

01	2400	10011							
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Item	Date	Receiving Report No.	Qty. Rcvd.	Balance Due	Blg.	Item	Date	Receiving Report No.	Qty. Rcvd.	Balance Due	Blg.

Deliver To SEE BELOW	Building	Room	Requisitioner
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DIVISION

CORP. ADMIN.

ASHLAND CHEMICAL CO.
P.O. Box 13305
TO Memphis, TN. 38113

PURCHASE ORDER			
<input type="checkbox"/> YES	<input type="checkbox"/> NO	8	8/28/66
SEE BELOW		86-78583	

B	S	1. FREEPORT, TX. 77541 - 6213 HWY. 332 E.
I	H	2. ROCHESTER, N.Y. 14613 - 1000 DRIVING PARK AVE.
L	I	3. LAKEWOOD, N.J. 08701 - 1869 CORPORATE RD. WEST
T	P	4. NEW BRUNSWICK, N.J. 08903 - 298 JERSEY AVE.
O	I	5. NEWTON, N.J. 07800 - 10 PATERSON AVE.
	P	6. PORTLAND, OR. 97210 - 8200 N.W. ST. HELENS RD.
	T	7. MT. PLEASANT, TN. 38474 - ARROW MINES ROAD
	O	8. MONMOUTH JUNCTION, N.J. 08852 - BLACK HORSE LANE
		9. NEW YORK, N.Y. 10017 - 52 VANDERBILT AVE.
		10. NEW BRUNSWICK, N.J. 08903 - 120 JERSEY AVE.
		11. WILLIAMSTOWN, MA. 01267 - 330 COLE AVE.
		12. MONMOUTH JUNCTION, N.J. 08852 P.O. BOX 125
		13. NEW BRUNSWICK, N.J. 08903 P.O. BOX 2009
		14. SEE BELOW
		15.

CONFIRMING TO:

Bill Whitlock

ON **8/28/66**

DATE REQUIRED DELIVER WEEK OF 9/2/66	SHIP VIA TANK TRUCK	ROUTE	MARKS TO APPEAR ON ALL INVOICES, CONTAINERS AND SHIPPER DOCUMENTS P.O. 86-78583	TERMS 5
PPD	COLL	ADD	ALLOWED	F.O.B.

ITEM	QTY. ORDERED	PRODUCT CODE OR PROJECT NO.	DESCRIPTION
1	45,100 lbs.	3-1320-00	DIMETHYLACETAMIDE 99%
DELIVERED			
SHIP TO: Rhone-Poulenc Inc. 5 Cedar Chemical Co. Highway 242 South W. Helena, AR. 72390			
NOTE: All Tank Trucks are to be equipped with two (2) sections of lined hoses & are to be pressurized or have pumps.			

01	2400	10011	
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Item	Date	Receiving Report No.	Qty. Rcvd.	Balance Due	Sig.	Item	Date	Receiving Report No.	Qty. Rcvd.	Balance Due	Sig.

RHÔNE-POULENC INC.

P O Box 125 - Black Horse Lane - Monmouth Junction New Jersey 08852 - Telephone (201) 297-0100 - Telex B44527

John Joel Hey
Clay Tom

September 5, 1986

Mr. Charlie Parker
Cedar Chemical Corp.
Highway 242 South
W. Helena, AR 72390

Dear Charlie:

With regard to the current campaign to produce RP-15, attached are receiving reports for the 2 orders issued thus far for Meta Cresol. It is anticipated a 3rd order will be issued shortly to cover the balance of the requirement.

Very truly yours,

RHONE POULENC, INC.

E. Schroder

E. Schroder
Purchasing Agent

ES/sg

Deliver To R. P. X Cedar Chem. Corp. N. Helena, AR	Building	Room	Requisitioner AG
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DIVISION CORP. ADMIN.

MERICKER CO.
4800 Texas Commerce Tower
Houston, TX. 77002

PURCHASE ORDER

DATE OF ORDER	QUANTITY	DATE	ORDER NO.
<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO		8/21/66	86-78579
SEE BELOW		SEE BELOW	

- | | |
|-----------|---|
| B | 1. FREEPORT, TX. 77541 - 6213 HWY. 332 E. |
| | 2. ROCHESTER, N.Y. 14613 - 1000 DRIVING PARK AVE. |
| | 3. LAKEWOOD, N.J. 08701 - 1669 CORPORATE RD. WEST |
| | 4. NEW BRUNSWICK, N.J. 08903 - 298 JERSEY AVE. |
| | 5. NEWTON, N.J. 07800 - 10 PATERSON AVE. |
| | 6. PORTLAND, OR. 97210 - 6200 N.W. ST. HELENS RD. |
| | 7. MT. PLEASANT, TN. 38474 - ARROW MINES ROAD |
| | 8. MONMOUTH JUNCTION, N.J. 08852 - BLACK HORSE LANE |
| | 9. NEW YORK, N.Y. 10017 - 62 VANDERBILT AVE. |
| | 10. NEW BRUNSWICK, N.J. 08903 - 120 JERSEY AVE. |
| | 11. WILLIAMSTOWN, MA. 01267 - 330 COLE AVE. |
| | 12. MONMOUTH JUNCTION, N.J. 08852 P.O. BOX 125 |
| | 13. NEW BRUNSWICK, N.J. 08903 P.O. BOX 2009 |
| XX | 14. SEE BELOW |
| | 15. SEE BELOW |

CONFIRMING TO: **Ann Lee** ON

DATE REQUIRED AT DESTINATION	SHIP VIA	ROUTE	MARKS TO APPEAR ON ALL PACKAGES CONTAINERS AND SHIPPING DOCUMENTS
SEE BELOW	TANK TRUCK-Miller Transporters (713-457-6348/9)		
FPD	COLL	ADD	ALLOWED
	X		
HOUSTON TX.			P.O. 86-78579 Release No.

ITEM	QTY. ORDERED	PRODUCT CODE OR PROJECT NO.	DESCRIPTION
1	Approx. 200,000 lbs.	9-1250-00	NETA CRESOL 99% Min.
			First shipment to ARRIVE next of 9/8/66.
			All other Releases to be made by Charlie Parker, Cedar Chem. Corp. (801-572-3781) Mericker Customer Service contact Ann Lee (800-231-3030)
			NOTE: Tank trucks are to be equipped with 2 sections of lined hoses and are to be pressurized or have pumps
			SHIP TO: Rhone-Poulenc Inc. 1 Cedar Chemical Corp. Highway 242 South West Helena, AR. 72390
			CERTIFICATES OF ANALYSIS required on all shipments. Send to attn. Quality Control Mgr. at receiving location.

01	2000	10011	
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Item	Date	Receiving Report No.	Qty. Rcvd.	Balance Due	Sig.	Item	Date	Receiving Report No.	Qty. Rcvd.	Balance Due	Sig.
				1 of 2							

Deliver To Rhone-Poulenc Inc. C/O Cedar Chemical, West Haven, Arkansas	Building	Division	Requisitioner E. Schroder
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IMPORT ORDER

PURCHASE ORDER		
VENDOR NO.	DATE	NUMBER
	September 3, 1986	08 20529

DIVISION LOGISTICS

MARKS TO APPEAR ON ALL INVOICES, CONTAINERS AND SHIPPING DOCUMENTS

TO **Societe Francaise D'Organes Synthetiques**
15 Boulevard de L'Amiral Bruix
75116 Paris
FRANCE

CONFIRMING TO: **E. Faberin** ON **9/2/86**

DATE REQUIRED AT DESTINATION			SHIP VIA	ROUTE	TERMS						
PPD	COLL	ADD	ALLOWED	F.O.B.	<input type="checkbox"/> - 90 DAYS END OF MONTH, 10TH PROX. <input type="checkbox"/> - 60 DAYS END OF MONTH, PLUS 15 DAYS. <input type="checkbox"/> - (SPECIFY, IF OTHER SEE BELOW)						
				CIF New Orleans	ACCT. CHARGE NO. 01-246-10011						
Item	QTY. ORDERED	PRODUCT CODE OR PROJECT NO.	DESCRIPTION								
1	2 Tanks	9-1250-00	Metastomol 990 Pins								
	of 1ST Each		Cleaning and return for Account Office								
Item	Date	Receiving Report No.	Qty. Rcv'd.	Balance Due	Sig.	Item	Date	Receiving Report No.	Qty. Rcv'd.	Balance Due	Sig.
X											
Alttransport Inc. 530 International Trade Mart New Orleans, LA 70118 504-522-0024											

Deliver To R.P. Cedar Chemical Corp. N. Helena AR.	Building	Room	Requisitioner AS
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DIVISION **COMP. ADMIN.**

TO **LCP Chemicals & Plastics Inc.
Baritan Plaza II
Baritan Center
Edison, N.J. 08837**

PURCHASE ORDER	
DATE 8/21/66	NUMBER 44-78581
<input type="checkbox"/> YES	<input checked="" type="checkbox"/> NO
SEE BELOW	

B I L L T O	<input type="checkbox"/>	1. FREEPORT, TX. 77541 - 8213 HWY 332 E.
	<input type="checkbox"/>	2. ROCHESTER, N.Y. 14613 - 1000 DRIVING PARK AVE.
	<input type="checkbox"/>	3. LAKEWOOD, N.J. 08701 - 1689 CORPORATE RD. WEST
	<input type="checkbox"/>	4. NEW BRUNSWICK, N.J. 08903 - 288 JERSEY AVE.
	<input type="checkbox"/>	5. NEWTON, N.J. 07800 - 10 PATERSON AVE.
	<input type="checkbox"/>	6. PORTLAND, OR. 97210 - 8200 N.W. ST. HELENS RD.
	<input type="checkbox"/>	7. MT. PLEASANT, TN. 38474 - ARROW MINES ROAD
	<input type="checkbox"/>	8. MONMOUTH JUNCTION, N.J. 08852 - BLACK HORSE LANE
	<input type="checkbox"/>	9. NEW YORK, N.Y. 10017 - 52 VANDERBILT AVE.
	<input type="checkbox"/>	10. NEW BRUNSWICK, N.J. 08903 - 120 JERSEY AVE.
	<input type="checkbox"/>	11. WILLIAMSTOWN, MA. 01267 - 330 COLE AVE.
	<input type="checkbox"/>	12. MONMOUTH JUNCTION, N.J. 08852 P.O. BOX 125
	<input type="checkbox"/>	13. NEW BRUNSWICK, N.J. 08903 P.O. BOX 2009
	<input checked="" type="checkbox"/>	14. SEE BELOW
	<input type="checkbox"/>	15.

CONFIRMING TO: **Victor Edwards** ON **8/15/66**

DATE REQUIRED AT DESTINATION	SHIP VIA	ROUTE	TERMS												
AS RELEASED	TANK TRUCKS		P.O. 44-78581												
PPF	COLL	ADD	ALLOWED												
X															
S.P. freight equipt with MISCLE SIGNALS, A.			Release No.												
			<table border="1"> <tr><td>1</td><td>11% 10 DAYS</td></tr> <tr><td>2</td><td>1% 10 DAYS</td></tr> <tr><td>3</td><td>2% 10 DAYS</td></tr> <tr><td>4</td><td>NET 10 DAYS</td></tr> <tr><td>5</td><td>NET 30 DAYS</td></tr> <tr><td>6</td><td>OTHER</td></tr> </table>	1	11% 10 DAYS	2	1% 10 DAYS	3	2% 10 DAYS	4	NET 10 DAYS	5	NET 30 DAYS	6	OTHER
1	11% 10 DAYS														
2	1% 10 DAYS														
3	2% 10 DAYS														
4	NET 10 DAYS														
5	NET 30 DAYS														
6	OTHER														

ITEM	QTY. ORDERED	PRODUCT CODE OR PROJECT NO.	DESCRIPTION
1	Approx. 250,000 lbs.	9-1190-00	CAUSTIC POTASH 48% LIQUID
<p>Releases to be made by Charlie Parker, Cedar Chem. Corp. (501-572-3701) LCP Customer Service (800-432-5082)</p> <p>NOTE: Tank trucks are to be equipped with 2 sections of lined hoses and are to be pressurized or have pump CERTIFICATES OF ANALYSIS required on all shipments.</p> <p>Send to Attn. Quality Control Mgr. at receiving location</p> <p>SHIP TO: Rhone-Poulenc Inc. 3 Cedar Chemical Corp. Highway 242 South West Helena, AR. 72390</p> <p>FREIGHT/BILLS TO BE SENT TO: Rhone-Poulenc Inc. P.O. Box 125 Monmouth Junction, N.J. 08852 Attn: Traffic Dept.</p>			

61	2400	19001							
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Item	Date	Receiving Report No.	Qty. Rcvd	Balance Due	Sig.	Item	Date	Receiving Report No.	Qty. Rcvd	Balance Due	Sig.

Deliver To R.P.S. GEORGE CHEM. CORP. W. MELERA, JR.	Building	Room	Requisitioner AG
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DIVISION CORP. ADMIN.

TO **CHENTECH INDUSTRIES INC.
2701 Channel Avenue
Memphis, TN. 38113**

PURCHASE ORDER

ORDER NUMBER 8	VENDOR NO.	DATE 8/21/96	NUMBER 86-78578
<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	SEE BELOW		

B	S	1. FREEPORT, TX. 77541 - 6213 HWY. 332 E.
I	H	2. ROCHESTER, N.Y. 14613 - 1000 DRIVING PARK AVE.
L	I	3. LAKEWOOD, N.J. 08701 - 1669 CORPORATE RD WEST
L	P	4. NEW BRUNSWICK, N.J. 08903 - 298 JERSEY AVE.
L	T	5. NEWTON, N.J. 07800 - 10 PATERSON AVE.
L	O	6. PORTLAND, OR. 97210 - 6200 N.W. ST. HELENS RD.
L	O	7. MT. PLEASANT, TN. 38474 - ARROW MINES ROAD
L	O	8. MONMOUTH JUNCTION, N.J. 08852 - BLACK HORSE LANE
L	O	9. NEW YORK, N.Y. 10017 - 52 VANDERBILT AVE.
L	O	10. NEW BRUNSWICK, N.J. 08903 - 120 JERSEY AVE.
L	O	11. WILLIAMSTOWN, MA. 01267 - 330 COLE AVE.
L	O	12. MONMOUTH JUNCTION, N.J. 08852 P.O. BOX 126
L	O	13. NEW BRUNSWICK, N.J. 08903 P.O. BOX 2009
L	O	14. SEE BELOW
L	O	15.

CONFIRMING TO: **H. Ray Jones** ON **8/21/96**

DATE REQUIRED AT DESTINATION	SHIP VIA	ROUTE	TERMS
AS RELEASED	TANK TRUCK		5
CPB	COLL	ADD	ALLOWED
X			
S.P. Freight equal with MUSCLE SHOALS, AL			P.O. 86-78578 Release No.

ITEM	QTY. ORDERED	PRODUCT CODE OR PROJECT NO.	DESCRIPTION
1	Approx. 250,000 lbs.	9-1190-00	CAUSTIC POTASH 45% LIQUID
			1st shipment to arrive week of 9/8/96.
			All further releases to be made by Charlie Parker, Cedar Chemical Corp. (501-572-3701) Chentech Customer Service 901-775-2100
			NOTE: Tank trucks are to be equipped with 2 sections of lined hoses and are to be pressurized or have pumps. CERTIFICATES OF ANALYSIS required on all shipments. Send to AET Quality Control Mgr. at receiving location. FREIGHT BILLS TO BE SENT TO:
			Rhone-Poulenc Inc. P.O. Box 125 Monmouth Junction, N.J. 08852 Attn: Traffic Dept.

01	2460	10001	
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Item	Date	Receiving Report No.	Qty. Rcvd	Balance Due	Sig.

Deliver To RP, INC. Cedar Chem. Corp., Niagara, N.Y.	Building	Room	Regulationer AS
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DIVISION CORP. ADMIN.

TO **OCCIDENTAL CHEMICAL CORP.
P.O. Box 344
Niagara Falls, N.Y. 14302**

PURCHASE ORDER

DATE	NUMBER
8/21/66	86-78580

BILL TO	<input type="checkbox"/> YES	<input checked="" type="checkbox"/> NO	8	8/21/66	86-78580
	1. FREEPORT, TX. 77541 - 6213 HWY. 332 E.				
	2. ROCHESTER, N.Y. 14613 - 1000 DRIVING PARK AVE.				
	3. LAKEWOOD, N.J. 08701 - 1669 CORPORATE RD. WEST				
	4. NEW BRUNSWICK, N.J. 08903 - 298 JERSEY AVE.				
	5. NEWTON, N.J. 07800 - 10 PATERSON AVE.				
	6. PORTLAND, OR. 97210 - 6200 N.W. ST. HELENS RD.				
	7. MT. PLEASANT, TN. 38474 - ARROW MINES ROAD				
	8. MONMOUTH JUNCTION, N.J. 08852 - BLACK HORSE LANE				
	9. NEW YORK, N.Y. 10017 - 62 VANDERBILT AVE.				
	10. NEW BRUNSWICK, N.J. 08903 - 120 JERSEY AVE.				
	11. WILLIAMSTOWN, MA. 01267 - 330 COLE AVE.				
	12. MONMOUTH JUNCTION, N.J. 08852 P.O. BOX 125				
	13. NEW BRUNSWICK, N.J. 08903 P.O. BOX 2009				
	14. SEE BELOW				
	15.				

CONFIRMING TO: **Dann Schinack** ON

DATE REQUIRED AT DESTINATION	SHIP VIA	ROUTE	TERMS
SEE BELOW	TANK TRUCK	Miller Transporters (800-648-5378) Woody Kelleher Chemical Leasing (512-436-7031)	5 1 1/2% 10 DAYS 3 1% 10 DAYS 3 2% 10 DAYS 6 NET 30 DAYS 6 OTHER (SPECIFY BELOW)
PPD. COLL. ADD.	ALLOWED	P.O. 86-78580 Niagara Falls, N.Y.	

ITEM	QTY. ORDERED	PRODUCT CODE OR PROJECT NO.	DESCRIPTION
1	Approx. 500,000 lbs.	9-1299-00	1,4-DICHLOROBENZOTRIFLUORIDE 99% Min.
<p>First shipment to <u>ARRIVE</u> end of 9/2/66. All other releases to be made by Charlie Parker, Cedar Chemical Corp. (501-572-3701) Occidental Customs Service Rep. Dann Schinack (800-629-1144) NOTE: All Tank Trucks are to be equipped with 2 sections of lined hoses and are to be equipped or have pumps <u>SHIP TO:</u> Rhone-Poulenc Inc. 3 Cedar Chemical Corp. Highway 202 South West Helena, AR. 72390</p> <p><u>SEND FREIGHT BILLS TO:</u> Rhone-Poulenc Inc. P.O. Box 125 Monmouth Junction, N.J. 08852 Attn: Traffic Dept.</p>			

03	2468	1991	
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Item	Date	Receiving Report No.	Qty. Rcvd.	Balance Due	Sig.	Item	Date	Receiving Report No.	Qty. Rcvd.	Balance Due	Sig.

Deliver To SEE BELOW	Building	Room	Requisitioner
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DIVISION CORP. ADMIN.

TO **ASHLAND CHEMICAL CO.
P.O. Box 13905
Memphis, TN. 38119**

PURCHASE ORDER

<input type="checkbox"/> YES	<input type="checkbox"/> NO	DATE	NUMBER
		8/22/86	06-78583
TERMS		SEE BELOW	

- B I L L T O
- S H I P T O
1. FREEPORT, TX. 77541 - 6213 HWY. 332 E.
 2. ROCHESTER, N.Y. 14813 - 1000 DRIVING PARK AVE.
 3. LAKEWOOD, N.J. 08701 - 1669 CORPORATE RD. WEST
 4. NEW BRUNSWICK, N.J. 08903 - 298 JERSEY AVE.
 5. NEWTON, N.J. 07800 - 10 PATERSON AVE.
 6. PORTLAND, OR. 97210 - 6200 N.W. ST. HELENS RD.
 7. MT. PLEASANT, TN. 38474 - ARROW MINES ROAD
 8. MONMOUTH JUNCTION, N.J. 08852 - BLACK HORSE LANE
 9. NEW YORK, N.Y. 10017 - 52 VANDERBILT AVE.
 10. NEW BRUNSWICK, N.J. 08903 - 120 JERSEY AVE.
 11. WILLIAMSTOWN, MA. 01267 - 330 COLE AVE.
 12. MONMOUTH JUNCTION, N.J. 08852 P.O. BOX 128
 13. NEW BRUNSWICK, N.J. 08903 P.O. BOX 2009
 14. **SEE BELOW**
 - 15.

CONFIRMING TO: **Gil Whitelock** ON **8/22/86**

DATE REQUIRED DELIVER WEEK OF 9/8/86	SHIP VIA TANK TRUCK	ROUTE	TERMS
PPD	COLL	ADD	ALLOWED
DELIVERED			P.O. 006-78583

ITEM	QTY ORDERED	PRODUCT CODE OR PROJECT NO.	DESCRIPTION
1	46,100 lbs.	3-1320-00	DIETHYLACETAMIDE 98%+
SHIP TO: Rhone-Poulenc Inc. 3 Cedar Chemical Co. Highway 262 South W. Helena, AR. 72390			
NOTE: All Tank Trucks are to be equipped with two (2) sections of lined hoses & are to be pressurized or have pumps.			

01	3408	10001			
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Item	Date	Receiving Report No.	Qty. Rcvd.	Balance Due	Sig.

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orig to Neil

RHÔNE-POULENC INC.

P O Box 125 - Black Horse Lane - Monmouth Junction, New Jersey 08852 - Telephone (201) 297-0100 - Telex 844527

May 18, 1987

Cedar Chemical
Highway 242 South
West Helena, Arkansas 72390

Gentlemen:

At the end of May, we have scheduled a physical inventory of all products stored at all outside locations.

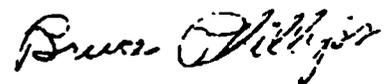
Therefore, we respectfully request that you complete the form enclosed showing all Rhone-Poulenc owned material in your possession as of the close of business May 31, 1987. If you discover any damaged inventory please make a note of it on the form.

Several of our outside storage facilities will be selected for an internal audit. If your location is selected, the person conducting the audit will contact you.

Please direct your response and any questions to Mr. Robert Dunn (201-821-2091) or Mr. George Ruska (201-821-2092) at the address above. A self-addressed, stamped envelope is enclosed for your convenience.

Your prompt and full cooperation will be greatly appreciated.

Very truly yours,



Bruce A. Phillips
Corporate Controller

BAP/alw
Enclosure



ADEQ0017385

Tackle Shipments from Cedar Chemical Company
 Analysis by Cedar Chemical Company Normalized to AI of 21.1 % wt/wt

Tacedar.wk1, p 2

11-May 08:29

Lot No.	RP-10	RP-2	RP-4	RP-6	RP-7	RP-8	RP-9	RP-14	RP-21/31	RP-28	RP-29	RP-20/30	RP-32	RP-33	Unknown	EDC	MeDc	FB-10	Purity
% w/w	% w/w	% w/w	% w/w	% w/w	% w/w	% w/w	% w/w	% w/w	% w/w	% w/w	% w/w	% w/w	% w/w	% w/w	% w/w	% w/w	% w/w	% w/w	%
ST017001	21.1	0.22	0.001	0.005	1.16	0.016	2.47	0.057	0.000	0.000	0.011	0.000	0.022	0.006	0.000	0.007	1.90	0.17	84.2
ST027002	21.1	0.29	0.001	0.004	1.17	0.019	2.40	0.046	0.001	0.000	0.012	0.000	0.023	0.003	0.000	0.008	1.67	0.17	84.2
ST027003	21.1	0.32	0.003	0.004	1.14	0.018	2.46	0.047	0.000	0.000	0.016	0.000	0.026	0.007	0.000	0.007	1.60	0.17	83.9
ST027004	21.1	0.30	0.000	0.000	1.18	0.013	2.49	0.034	0.000	0.020	0.027	0.000	0.034	0.007	0.000	0.010	1.62	0.17	83.7
ST027005	21.1	0.38	0.001	0.000	1.16	0.012	2.50	0.026	0.000	0.000	0.000	0.000	0.036	0.002	0.000	0.007	2.45	0.17	83.7
ST027006	21.1	0.31	0.002	0.000	1.24	0.021	2.47	0.025	0.000	0.000	0.023	0.000	0.039	0.023	0.000	0.003	1.76	0.16	83.6
ST027007	21.1	0.32	0.002	0.000	1.20	0.016	2.49	0.024	0.000	0.000	0.016	0.000	0.032	0.006	0.000	0.008	2.41	0.16	83.7
ST027008	21.1	0.45	0.002	0.000	1.19	0.016	2.46	0.020	0.000	0.000	0.012	0.000	0.026	0.004	0.000	0.007	1.40	0.17	83.5
ST027009	21.1	0.43	0.002	0.000	1.14	0.020	2.46	0.023	0.000	0.000	0.011	0.000	0.029	0.004	0.000	0.008	1.38	0.16	83.6
ST027010	21.1	0.41	0.002	0.000	1.16	0.020	2.47	0.015	0.000	0.000	0.012	0.000	0.026	0.004	0.000	0.007	1.76	0.16	83.7
ST027011	21.1	0.40	0.002	0.000	1.16	0.020	2.44	0.016	0.000	0.000	0.014	0.000	0.027	0.008	0.000	0.005	1.34	0.17	83.8
ST027012	21.1	0.16	0.002	0.000	1.19	0.024	2.50	0.016	0.000	0.000	0.016	0.000	0.028	0.008	0.000	0.012	1.34	0.16	84.3
ST037013	21.1	0.19	0.002	0.000	1.19	0.024	2.53	0.016	0.000	0.000	0.016	0.000	0.031	0.016	0.000	0.009	1.23	0.16	84.0
ST037014	21.1	0.14	0.005	0.000	1.18	0.030	2.43	0.020	0.000	0.000	0.022	0.000	0.031	0.007	0.000	0.009	1.37	0.16	84.8
ST037015	21.1	0.11	0.005	0.000	1.14	0.035	2.46	0.013	0.000	0.000	0.015	0.000	0.031	0.003	0.000	0.007	1.30	0.16	84.7
ST037016	21.1	0.16	0.006	0.000	1.17	0.037	2.44	0.016	0.000	0.000	0.023	0.000	0.030	0.006	0.000	0.005	1.26	0.17	84.4
ST037017	21.1	0.13	0.005	0.000	1.16	0.041	2.42	0.015	0.000	0.000	0.019	0.000	0.027	0.004	0.000	0.004	1.11	0.17	84.6
ST037018	21.1	0.12	0.008	0.000	1.16	0.046	2.46	0.015	0.000	0.000	0.016	0.000	0.026	0.044	0.000	0.008	1.36	0.17	84.4
ST037019	21.1	0.11	0.006	0.002	1.19	0.062	2.48	0.020	0.000	0.002	0.029	0.000	0.037	0.019	0.000	0.006	1.65	0.16	84.3
ST037020	21.1	0.13	0.008	0.000	1.16	0.067	2.40	0.025	0.000	0.000	0.017	0.000	0.033	0.004	0.000	0.006	1.54	0.17	84.6
ST037021	21.1	0.31	0.009	0.000	1.16	0.061	2.48	0.017	0.000	0.000	0.026	0.000	0.026	0.005	0.000	0.006	1.60	0.17	83.8
ST037022	21.1	0.37	0.009	0.000	1.13	0.058	2.45	0.014	0.000	0.000	0.022	0.000	0.028	0.003	0.000	0.003	1.60	0.17	83.8
ST037023	21.1	0.21	0.007	0.000	1.18	0.065	2.43	0.017	0.000	0.000	0.014	0.000	0.021	0.003	0.000	0.002	1.45	0.17	84.3
ST037024	21.1	0.16	0.007	0.004	1.23	0.064	2.47	0.016	0.002	0.002	0.016	0.000	0.026	0.008	0.000	0.003	1.63	0.17	83.9
ST037025	21.1	0.33	0.010	0.006	1.21	0.096	2.59	0.021	0.000	0.002	0.016	0.000	0.037	0.006	0.000	0.002	1.60	0.17	83.0
ST037026	21.1	0.21	0.009	0.006	1.26	0.063	2.42	0.016	0.000	0.002	0.017	0.000	0.037	0.006	0.000	0.001	1.68	0.17	83.9
ST037027	21.1	0.17	0.004	0.006	1.16	0.092	2.46	0.017	0.000	0.000	0.014	0.000	0.025	0.006	0.000	0.004	1.50	0.17	84.2
ST037028	21.1	0.17	0.008	0.005	1.19	0.091	2.37	0.017	0.000	0.000	0.014	0.000	0.025	0.006	0.000	0.003	1.35	0.17	84.6
ST037029	21.1	0.19	0.017	0.008	1.08	0.083	2.38	0.025	0.000	0.000	0.017	0.000	0.017	0.005	0.000	0.002	1.32	0.17	84.6
ST037030	21.1	0.16	0.008	0.008	1.23	0.089	2.64	0.017	0.000	0.000	0.017	0.000	0.026	0.003	0.000	0.003	1.43	0.17	83.7
ST047031	21.1	0.15	0.016	0.016	1.22	0.116	2.39	0.020	0.000	0.008	0.016	0.000	0.026	0.004	0.000	0.010	1.39	0.17	84.1
ST047032	21.1	0.21	0.014	0.016	1.19	0.120	2.47	0.008	0.000	0.003	0.016	0.000	0.026	0.003	0.000	0.003	1.08	0.17	83.8
ST047033	21.1	0.16	0.010	0.010	1.18	0.087	2.39	0.015	0.000	0.003	0.015	0.000	0.026	0.004	0.000	0.003	1.29	0.17	84.5
ST047034	21.1	0.18	0.008	0.010	1.15	0.080	2.43	0.007	0.000	0.003	0.014	0.000	0.025	0.006	0.000	0.003	1.47	0.17	84.3
ST047035	21.1	0.34	0.008	0.008	1.20	0.074	2.47	0.025	0.000	0.000	0.016	0.000	0.033	0.008	0.000	0.008	1.06	0.16	83.5
ST047036	21.1	0.24	0.000	0.004	1.16	0.070	2.52	0.035	0.013	0.000	0.009	0.000	0.018	0.004	0.000	0.001	1.00	0.16	83.6
ST047037	21.1	0.22	0.005	0.000	0.97	0.060	2.50	0.026	0.000	0.000	0.010	0.000	0.017	0.003	0.000	0.002	1.23	0.17	84.7
ST047038	21.1	0.27	0.006	0.006	1.18	0.061	2.42	0.022	0.000	0.000	0.009	0.000	0.016	0.003	0.000	0.001	1.12	0.17	84.1
ST047039	21.1	0.23	0.000	0.000	1.16	0.050	2.08	0.008	0.000	0.000	0.008	0.000	0.017	0.003	0.000	0.003	1.02	0.17	85.6
ST047040	21.1	0.42	0.008	0.009	1.21	0.076	2.43	0.017	0.000	0.000	0.014	0.000	0.017	0.004	0.000	0.002	1.18	0.17	83.4
ST047041	21.1	0.21	0.007	0.007	1.18	0.069	2.39	0.009	0.000	0.000	0.013	0.000	0.020	0.002	0.000	0.007	1.03	0.17	84.9
ST057042	21.1	0.24	0.007	0.009	1.09	0.069	2.38	0.013	0.000	0.000	0.016	0.000	0.029	0.003	0.000	0.001	1.29	0.17	84.6
ST057043	21.1	0.24	0.006	0.005	1.25	0.066	2.42	0.015	0.000	0.000	0.012	0.000	0.021	0.004	0.000	0.004	0.92	0.17	84.0
ST057044	21.1	0.19	0.005	0.008	1.19	0.059	2.45	0.018	0.000	0.000	0.012	0.000	0.028	0.008	0.000	0.005	1.18	0.17	84.2
Mean	21.1	0.24	0.006	0.004	1.17	0.053	2.44	0.020	0.000	0.001	0.016	0.000	0.027	0.007	0.000	0.005	1.44	0.17	84.1
Std Dev		0.10	0.004	0.004	0.05	0.028	0.07	0.010	0.002	0.003	0.005	0.000	0.006	0.007	0.000	0.003	0.33	0.00	0.5
Rel Dev		39	70	116	4	54	3	49	860	333	33	0	22	107	0	54	23	3	1
Mfg Spec	21.1	1.10	0.07	0.07	1.30	0.70	3.40	0.10	0.07	0.07	0.10	0.07	0.10	0.10	<0.07	0.010	2.00	0.3	

cc: M. Royer R. Theissen G. Vorn

Tackle Shipments from Cedar Chemical Company
 Analysis by Cedar Chemical Company

To cedar, WA 11-May 08:18

Lot No.	RP-10	RP-2	RP-4	RP-5	RP-7	RP-8	RP-9	RP-14	RP-21/31	RP-28	RP-29	RP-20/30	RP-32	RP-33	Unknown	EDC	MeOAc	FG-10	Color	pH	Purity
% w/w	% w/w	% w/w	% w/w	% w/w	% w/w	% w/w	% w/w	% w/w	% w/w	% w/w	% w/w	% w/w	% w/w	% w/w	% w/w	% w/w	% w/w	% w/w	Gardner		%
ST017001	31.30	0.33	0.002	0.008	1.71	0.024	3.67	0.085	0.000	0.000	0.017	0.000	0.032	0.009	0.000	0.011	2.82	0.25	14	7.02	84.2
ST027002	31.50	0.43	0.002	0.006	1.75	0.028	3.58	0.069	0.001	0.000	0.018	0.000	0.035	0.005	0.000	0.012	2.50	0.25	10	7.03	84.2
ST027003	31.70	0.49	0.004	0.006	1.72	0.027	3.70	0.070	0.000	0.000	0.027	0.000	0.039	0.010	0.000	0.010	2.71	0.25	10	7.10	83.9
ST027004	31.30	0.45	0.000	0.000	1.75	0.020	3.70	0.050	0.000	0.030	0.040	0.000	0.050	0.010	0.000	0.015	2.70	0.25	10	7.28	83.7
ST027005	29.33	0.53	0.002	0.000	1.51	0.017	3.47	0.036	0.000	0.000	0.000	0.000	0.050	0.003	0.000	0.010	3.40	0.23	10	7.07	83.7
ST027006	27.30	0.40	0.002	0.000	1.60	0.027	3.20	0.032	0.000	0.000	0.030	0.000	0.050	0.030	0.000	0.004	2.28	0.23	10	7.36	83.6
ST027007	26.30	0.40	0.002	0.000	1.50	0.020	3.10	0.030	0.000	0.000	0.020	0.000	0.040	0.007	0.000	0.010	3.00	0.20	10	7.40	83.7
ST027008	25.56	0.94	0.003	0.000	1.44	0.022	2.98	0.024	0.000	0.000	0.014	0.000	0.031	0.005	0.000	0.009	1.69	0.20	10	7.60	83.5
ST027009	25.80	0.53	0.002	0.000	1.40	0.024	3.01	0.028	0.000	0.000	0.013	0.000	0.036	0.005	0.000	0.010	1.69	0.20	10	7.94	83.6
ST027010	25.60	0.50	0.002	0.000	1.41	0.024	3.00	0.018	0.000	0.000	0.015	0.000	0.031	0.005	0.000	0.008	2.14	0.20	10	7.71	83.7
ST027011	25.40	0.48	0.002	0.000	1.40	0.024	2.94	0.019	0.000	0.000	0.017	0.000	0.032	0.006	0.000	0.006	1.61	0.20	10	7.77	83.8
ST027012	26.15	0.20	0.002	0.000	1.47	0.030	3.10	0.020	0.000	0.000	0.020	0.000	0.035	0.010	0.000	0.015	1.56	0.20	10	7.56	84.3
ST037013	26.90	0.24	0.003	0.000	1.52	0.030	3.23	0.020	0.000	0.000	0.020	0.000	0.040	0.020	0.000	0.011	1.57	0.20	10	7.56	84.0
ST037014	25.65	0.17	0.006	0.000	1.44	0.036	2.95	0.024	0.000	0.000	0.027	0.000	0.038	0.008	0.000	0.011	1.67	0.20	10	7.40	84.5
ST037015	25.60	0.14	0.006	0.000	1.38	0.043	2.98	0.016	0.000	0.000	0.018	0.000	0.038	0.004	0.000	0.009	1.58	0.20	10	7.60	84.7
ST037016	24.60	0.19	0.007	0.000	1.36	0.043	2.85	0.019	0.000	0.000	0.027	0.000	0.035	0.007	0.000	0.006	1.59	0.20	10	7.50	84.4
ST037017	25.20	0.15	0.006	0.000	1.41	0.049	2.89	0.018	0.000	0.000	0.023	0.000	0.032	0.005	0.000	0.005	1.33	0.20	10	7.50	84.6
ST037018	24.70	0.14	0.009	0.000	1.36	0.056	2.90	0.018	0.000	0.000	0.019	0.000	0.031	0.002	0.000	0.009	1.59	0.20	10	7.75	84.4
ST037019	25.90	0.13	0.007	0.003	1.46	0.064	3.04	0.024	0.000	0.002	0.036	0.000	0.045	0.023	0.000	0.006	2.03	0.20	10	7.40	84.3
ST037020	25.20	0.16	0.009	0.000	1.38	0.080	2.87	0.030	0.000	0.000	0.020	0.000	0.040	0.005	0.000	0.007	1.84	0.20	10	7.39	84.6
ST037021	24.30	0.36	0.010	0.000	1.36	0.070	2.82	0.020	0.000	0.000	0.030	0.000	0.030	0.006	0.000	0.007	1.84	0.20	10	7.94	83.8
ST037022	24.20	0.43	0.010	0.000	1.30	0.067	2.81	0.016	0.000	0.000	0.025	0.000	0.032	0.004	0.000	0.003	1.84	0.20	10	7.40	83.8
ST037023	24.40	0.24	0.008	0.000	1.36	0.064	2.81	0.020	0.000	0.000	0.016	0.000	0.024	0.003	0.000	0.003	1.58	0.20	10	7.30	84.3
ST037024	25.46	0.22	0.009	0.006	1.49	0.077	2.98	0.019	0.002	0.003	0.022	0.000	0.034	0.006	0.000	0.004	2.21	0.20	10	7.51	83.9
ST037025	24.20	0.38	0.012	0.007	1.39	0.110	2.97	0.024	0.000	0.002	0.021	0.000	0.043	0.007	0.000	0.002	1.84	0.20	10	7.42	83.0
ST037026	24.70	0.26	0.010	0.007	1.47	0.074	2.83	0.019	0.000	0.002	0.020	0.000	0.043	0.007	0.000	0.001	1.82	0.20	10	7.58	83.9
ST037027	25.20	0.21	0.005	0.007	1.39	0.110	2.94	0.020	0.000	0.000	0.017	0.000	0.030	0.009	0.000	0.005	1.79	0.20	10	7.85	84.2
ST037028	24.90	0.20	0.009	0.006	1.40	0.060	2.80	0.020	0.000	0.000	0.017	0.000	0.029	0.007	0.000	0.004	1.60	0.20	10	7.80	84.6
ST037029	25.50	0.23	0.020	0.010	1.31	0.100	2.88	0.030	0.000	0.000	0.020	0.000	0.020	0.006	0.000	0.003	1.60	0.20	10	7.70	84.6
ST037030	24.90	0.19	0.010	0.010	1.45	0.100	3.00	0.020	0.000	0.000	0.020	0.000	0.030	0.004	0.000	0.003	1.69	0.20	10	7.70	83.7
ST047031	24.30	0.17	0.018	0.018	1.41	0.134	2.75	0.023	0.000	0.006	0.019	0.000	0.032	0.005	0.000	0.011	1.56	0.20	10	8.00	84.1
ST047032	24.30	0.24	0.016	0.018	1.37	0.138	2.85	0.009	0.000	0.004	0.018	0.000	0.029	0.004	0.000	0.004	1.21	0.20	10	7.83	83.8
ST047033	24.20	0.18	0.011	0.012	1.32	0.100	2.74	0.017	0.000	0.003	0.017	0.000	0.032	0.005	0.000	0.004	1.48	0.20	10	7.60	84.5
ST047034	24.90	0.21	0.010	0.012	1.36	0.094	2.87	0.008	0.000	0.003	0.017	0.000	0.030	0.007	0.000	0.004	1.74	0.20	10	7.65	84.3
ST047035	25.60	0.41	0.010	0.010	1.45	0.090	3.00	0.030	0.000	0.000	0.020	0.000	0.040	0.010	0.000	0.010	1.29	0.20	10	7.54	83.5
ST047036	24.04	0.27	0.000	0.004	1.32	0.080	2.87	0.040	0.015	0.000	0.010	0.000	0.020	0.004	0.000	0.002	1.14	0.20	10	8.29	83.8
ST047037	24.80	0.26	0.006	0.000	1.14	0.070	2.94	0.030	0.000	0.000	0.012	0.000	0.020	0.004	0.000	0.002	1.45	0.20	10	7.77	84.7
ST047038	24.40	0.31	0.007	0.006	1.36	0.070	2.80	0.026	0.000	0.000	0.010	0.000	0.018	0.004	0.000	0.001	1.30	0.20	10	7.55	84.1
ST047039	25.10	0.27	0.000	0.000	1.38	0.060	2.48	0.010	0.000	0.000	0.010	0.000	0.020	0.003	0.000	0.004	1.21	0.20	10	7.60	85.6
ST047040	25.00	0.50	0.009	0.011	1.43	0.090	2.88	0.020	0.000	0.000	0.017	0.000	0.020	0.005	0.000	0.002	1.40	0.20	10	7.88	83.4
ST047041	24.60	0.24	0.008	0.008	1.34	0.080	2.79	0.010	0.000	0.000	0.015	0.000	0.023	0.002	0.000	0.008	1.20	0.20	10	7.60	84.5
ST057042	24.60	0.29	0.008	0.010	1.27	0.080	2.75	0.015	0.000	0.000	0.019	0.000	0.034	0.004	0.000	0.001	1.82	0.20	10	7.32	84.6
ST057043	26.60	0.30	0.007	0.006	1.57	0.083	3.05	0.019	0.000	0.000	0.015	0.000	0.026	0.005	0.000	0.005	1.16	0.21	10	7.94	84.0
ST057044	27.26	0.24	0.007	0.007	1.54	0.071	3.17	0.023	0.000	0.000	0.016	0.000	0.038	0.007	0.000	0.007	1.53	0.22	10	7.60	84.2

cc: M. Royer
 R. Theissen
 G. Vera

- Cedar Chemical Co.

RHÔNE-POULENC INC.

P.O. Box 125 - Black Horse Lane - Monmouth Junction, New Jersey 08852 - Telephone (201) 297-0100 - Telex 844527

Charlie
Tom
Richard
Joe
Ken
Joel

May 18, 1987

OVERNIGHT EXPRESS MAIL

Mr. Ron Cheves
Vice President
CEDAR CHEMICAL CORPORATION
5100 Poplar Avenue
24th Floor
Memphis, Tennessee 38137

Dear Mr. Cheves:

Pursuant to our Letter Agreement, dated September 5, 1986, please be advised that Rhone-Poulenc shall not issue future purchase orders for the production of either RP-15 or RP-10.

Very truly yours,

RHONE-POULENC INC.

By: 
~~Jean-Pierre Dal Pont~~
Vice President
TECHNICAL SERVICES



ADEQ0017532

RHÔNE-POULENC INC.

P O Box 125 - Black Horse Lane - Monmouth Junction New Jersey 08852 - Telephone (201) 297-0100 - Telex 844527

May 18, 1987

OVERNIGHT EXPRESS MAIL

Mr. Ron Cheves
Vice President
CEDAR CHEMICAL CORPORATION
5100 Poplar Avenue
24th Floor
Memphis, Tennessee 38137

Dear Mr. Cheves:

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Very truly yours,

RHONE-POULENC INC.

By:


~~Jean-Pierre Dal Pont~~
Vice President
TECHNICAL SERVICES



ADEQ0017704

CEDAR INTERNAL CORRESPONDENCE

DATE: 5/26/87

TO: Geoff Pratt

FROM: John Miles



cc: Lodice
Satterfield
Parker
Robbins
Porter

SUBJECT: R-P project (RP-15 & RP-10)

1. We need to know disposition of the following items:
 - Raw materials
 - Product
 - Waste
 - Lab retains
 - Rail Cars
2. Please address what further production, accounting, and technical information is required.
3. Please clarify who is financially responsible for cleaning of storage tanks & disposal of any waste generated.

RHÔNE-POULENC INC.

P O Box 125 - Black Horse Lane - Monmouth Junction. New Jersey 08852 - Telephone (201) 297-0100 - Telex. 844527

CC: Neil
Charlie
Tom
Richard
Greg
Joe
Ken
Joel

May 18, 1987

OVERNIGHT EXPRESS MAIL

Mr. Ron Cheves
Vice President
CEDAR CHEMICAL CORPORATION
5100 Poplar Avenue
24th Floor
Memphis, Tennessee 38137

Dear Mr. Cheves:

Pursuant to our Letter Agreement, dated September 5, 1986, please be advised that Rhone-Poulenc shall not issue future purchase orders for the production of either RP-15 or RP-10.

Very truly yours,

RHONE-POULENC INC.

By:


~~Jean-Pierre Dal Pont~~
Vice President
TECHNICAL SERVICES



ADEQ0017379

CETAR CHEMICAL CORPORATION
MEMPHIS, TN.

ORDER DATE ORDER NUMBER

SHIPPED

5/21/87 5107

INVOICE TO
RHONE POULENC INC.
ATTN: JEAN-PIERRE DAL PONT
P. O. BOX 125
MONMOUTH JUNCTION, NJ 08852

SHIPPED COMPLETE

SHIP TO
RHONE POULENC INC.
ATTN: JEAN-PIERRE DAL PONT
P. O. BOX 125
MONMOUTH JUNCTION, NJ 08852

REQUESTED	CUST. NO.	CUST. ORDER NO.	SALESMAN	FRT. PPD/COL
5/21/87	7330-01	86-78582	K. CHEVES	PPD

SHIPPED FROM	FOR POINT	SHIP VIA	TERMS	DATE
WEST HELFNA PLANT	SHIPPING POINT		NET 10	5/31/87

QUANTITY SHIPPED	CONTAINER SIZE	ITEM NUMBER	DESCRIPTION	UNIT PRICE	BILLING UNIT	EXTENDED UNIT SALE PRICE
			RP 10 PRODUCTION	99,999.99		300
			RI 10 PRODUCTION	66,666.76		400
E			TO INVOICE YOU FOR PRODUCTION OF RI 10 AS FOLLOWS:			500
E			APR 23 THRU MAY 17 - 2: DAYS X \$6,666.67 = \$133,333.33			600
J			GIVE TO GEOFF PRATT FOR HIS HANDLING			700

INV. TOTAL 166,666.75

CEDAR CHEMICAL CORPORATION
MEMPHIS, TN.

ORDER DATE ORDER NUMBER

SHIPPED

5/21/87 5106

INVOICE TO
RHONE POULENC INC.
ATTN: JEAN-PIERRE DAL PONT
P. O. BOX 125
MONMOUTH JUNCTION, NJ 08852

SHIPPED COMPLETE

SHIP TO
RHONE POULENC INC.
ATTN: JEAN-PIERRE DAL PONT
P. O. BOX 125
MONMOUTH JUNCTION, NJ 08852

REQUESTED	CUST. NO.	CUST. ORDER NO.	SALESMAN	FRT. PPD/COL
5/21/87	7350-01	Br-7058	K. CHEVES	PPH

SHIPPED FROM	FOR POINT	SHIP VIA	TERMS	DATE
WEST HELENA PLANT	SHIPPING POINT		NET 10	5/31/87

QUANTITY SHIPPED	CONTAINER SIZE	ITEM NUMBER DESCRIPTION	UNIT PRICE	BILLING UNIT	EXTENDED PRICE
		WASTE WATER CHARGES			11,129.92
7		TO INVOICE YOU WITH WASTE WATER TREATMENT AS FOLLOWS:			300
E		BATCHES 110 THRU 135 - 139,099 LBS Y @ .08 = \$11,129.92			400
I		OIVE TO GEOFF PRATT FOR HIS HANDLING.			500
					600

INV. TOTAL 11,129.92

CEDAR CHEMICAL CORPORATION
MEMPHIS, TN.

ORDER DATE 5/21/87
ORDER NUMBER 5108

SHIPPED

5/21/87 5108

INVOICE TO
RHONE POULENC INC.
ATTN: JEAN-PIERRE DAL PONT
P. O. BOX 125
MONMOUTH JUNCTION, NJ 08852

SHIPPED COMPLETE

SHIP TO
RHONE POULENC INC.
ATTN: JEAN-PIERRE DAL PONT
P. O. BOX 125
MONMOUTH JUNCTION, NJ 08852

REQUESTED	CUST. NO.	CUST. ORDER NO.	SALESMAN	FRT. P'D/COL
5/21/87	7350-01	HA-78582	K. CHEVCH	PPU

SHIPPED FROM	FOR QUANT	SHIP VIA	TERMS	DATE DATE
WEST HELENA PLANT	SHIPPING POINT		NET 10	5/31/87

QUANTITY SHIPPED	CONTAINER SIZE	ITEM NUMBER	DESCRIPTION	UNIT PRICE	EXTENDED UNIT SALE PRICE
		RP 15	PROJ SCOPE CHANGES	94,999.99	300
		RP 10	PROJ SCOPE CHANGES	20,000.01	400
		RP 10	PROJ SCOPE CHANGES	99,999.99	500
		RP 10	PROJ SCOPE CHANGES	99,999.99	600
		RP 10	PROJ SCOPE CHANGES	60,000.02	700
		CR	4000 GAL VESSEL	60,000.00	900
E			TO INVOICE YOU WITH SCOPE CHANGES AS PER ATTACHED LETTER.		1000
I			GIVE TO GEOFF PRATT FOR HTS HANDLING		1100

INV. TOTAL 325,000.00

PKG COST

RP-10

BALL PARK ESTIMATE

- I. BASIS: 300 M GAL TACKLE
 5000 GAL / DAY , 5 DAY / WK
 160 GAL / PALLET , 5X1 CASE , 1 GAL JUG

II. CAPITAL

- | | |
|-----------------------------------|--------------|
| 1. FILLERS 2 IN SERAC 2237-P2 | \$ 40000 |
| 2. HEAT SEALER FOR CAPS | 10000 |
| 3. STRETCH WRAP MACHINE / ROLLERS | <u>10000</u> |
| | \$ 60000 |

$\$60M / 300M = \$0.20 / GAL$

III. OPERATING SUPPLIES

		\$ / GAL
PALLET	\$ 8.00	0.0500
TRAY & CAP	\$ 2.00 / PALLET	0.0125
STRETCH WRAP	\$ 2.00 / PALLET	0.0125
FILTER AID		<u>0.0100</u>
		0.0850

IV. LABOR

8 MEN @ $(\$5.00 \times 1.45)^{7.25} / HR = \$0.095 / GAL$

V. TOTAL

38¢ / GAL

VI. ITEMS NOT COVERED

1. WAREHOUSING - PKG MTRLS OR PRODUCT



Référence à rappeler
sur tous documents

COMMANDE N°

01/0087
010/0087



RHÔNE-POULENC AGROCHIMIE

14-20, RUE PIERRE BAIZET B.P. 8163
69283 LYON CEDEX 09 - TEL. 72 29 25 25
See Achats : Téléc 308148 F Rhône - Fax 72 29 22 82
See Approvisionnement : Téléc 308290 F Rhône - Fax 72 29 22 83



CACHET ET SIGNATURE DU FOURNISSEUR

LE 31 JUILLET 1990

CEDAR CHEMICAL CORPORATION
24TH FLOOR
5100 POPLAR AVENUE
MEMPHIS TN 38197 U.S.A.

A

Lo

REF 20032-A-04-80-1

CODE	QUANTITE	DESIGNATION / PRIX
305131A	79	<p>A L ATTENTION DE M. GEOFFROY L. PRATT</p> <p>METHYLTHIOFIRACOLONE OXIME PRIX : 13203.0000 DOLLAR USA PAR TONNE FOB WPT HELENA</p> <p>PROV.:US ORIG.:US</p> <p>PRIX NET : USD 1.20/LB + 150.000 USD FEE EMBALLAGE : 14 DRUMS THIS CORRESPONDS TO A PROCESSING OF 14 MT OF MCF INTO TPO. DOCUMENTS TO BE SENT TO F. DANION IN LYON :</p> <ul style="list-style-type: none"> - RECEIPT NOTES FOR MCF - BILL OF LADING (2 ORIGINALS + 4 COPIES) - INVOICES (1 EX) - ANALYSIS CERTIFICATES FOR EACH EXPEDITION - ORIGIN CERT. DATE - COMISIGNED BY RHONE-POULENC AGROCHIMIE (S O MAPROCHIM 50 RUE DE MONTQUEF BP 1093 70000 LE HAVRE FRANCE) - IDENTIFICATION MAPROCHIM LE HAVRE - FORWARDING AGENT : MG MAHLER NEW ORLEANS (US) <p>2 ORIGINAL INVOICES TO BE SENT WITH TRANSPORT FOR CUSTOMS</p>

Montant total	790.180 USD	Lieu de stock X	Négociateur
FACTURATION A :	RP AGROCHIMIE BF 142 69400	SERVICE COMPTABILITE VILLEFRANCHE SUR SAONE	F. DANION
Date de livraison :	VOIR CI-DESSUS		Approvisionneur <i>Geoffroy L. Pratt</i> S. DANON

Référence à rappeler
sur tous documents

COMMANDE N°

010/C067



RHÔNE-POULENC AGROCHIMIE

RECEIVED

AUG 6 1990

14-20, RUE PIERRE BAIZET B.P. 9163
69263 LYON CEDEX 09 - TEL 72 29 25 25
Svc Achats : Télex 306148 F Rhône - Fax 72 29 22 62
Svc Approvisionnement : Télex 306290 F Rhône - Fax 72 29 22 69

Ans'd.....

LE 31 JUILLET 1990

Aux conditions générales d'achat et de paiement
figurant au verso veuillez noter notre commande.

Accusé de réception ci-joint, à retourner revêtu
de votre cachet et de votre signature par retour
du courrier à :

CEDAR CHEMICAL CORPORATION
24TH FLOOR
5100 POPLAR AVENUE
MEMPHIS TN 38137 U.S.A.

R.P. AGROCHIMIE
ATT MELLE LAMBERT BP 9163
69263 LYON CEDEX 09

REF 00032-P-04-00-1

CODE	QUANTITE	DESIGNATION / PRIX
		<p>A L ATTENTION DE M. GEOFFROY L. PRATT</p> <p>CEDAR WILL MANAGE COMPLETELY THE TRANSPORTATION TO RHONE POULENC ELBEUF AND INVOICE RHONE POULENC AGROCHIMIE FOR THESE EXPENSES</p> <p>DELIVERY DATES FOB NEW ORLEANS : 20 T WEEK 38 20 T WEEK 40 20 T WEEK 42</p>

Montant total	798.180 USD	Lieu de stock X	Négociateur
FACTURATION A	RP AGROCHIMIE BP 442 69400	SERVICE COMPTABILITE VILLEFRANCHE SUR SAONE	F. DANION
Date de livraison :	VOIR CI-DESSUS		Approvonneur <i>C. Chautot</i>

Référence à rappeler
sur tous documents

COMMANDE N°

01070367



RHÔNE-POULENC AGROCHIMIE

14-20, RUE PIERRE BAIZET B.P. 9163
69263 LYON CEDEX 09 - TEL 72 29 25 25
Svc Achats : Télax 306148 F Rhône - Fax 72 29 22 62
Svc Approvisionnement : Télax 306290 F Rhône - Fax 72 29 22 63

RECEIVED

AUG 8 1990

Ans'd.....

LE 31 JUILLET 1990

Aux conditions générales d'achat et de paiement
figurant au verso veuillez noter notre commande.

Accusé de réception ci-joint, à retourner revêtu
de votre cachet et de votre signature par retour
du courrier à :

CEDAR CHEMICAL CORPORATION
24TH FLOOR
5100 POPLAR AVENUE
MEMPHIS TN 38197 U.S.A.

R.P. AGROCHIMIE
ATT MELLE LAMBERT BP 9163
69263 LYON CEDEX 09

REF 200007-P-04 80-3

CODE	QUANTITE	DÉSIGNATION / PRIX
306131A	50	<p>A L ATTENTION DE M. GEOFFROY L. PRATT</p> <p>METHYLTHIOPIRACLOLONE OXINE PRIX : 13293,000 DOLLAR USA PAR TONNE FOR WEST HELENA</p> <p>PROV.:US ORIG.:US</p> <p>PRIX : SOIT : USD 4.90/LB + 150,000 USD FEE EMBALLAGE : IN DRUMS THIS CORRESPONDS TO A PROCESSING OF 54 MT OF MCP INTO MTPO. DOCUMENTS TO BE SENT TO F. CANION IN LYON :</p> <ul style="list-style-type: none"> - RECEIPT NOTES FOR MCP - BILL OF LADING (2 ORIGINALS + 4 COPIES) - INVOICE (4 Ex) - ANALYSIS CERTIFICATES FOR EACH EXPEDITION - ORIGIN CERTIFICATE - CONSIGNEE : RHONE POULENC AGROCHIMIE C/O MAPROCHIM 58 RUE DE MULHOUSE BP 1693 75062 LE HAVRE FRANCE - CERTIFICATION MAPROCHIM LE HAVRE - FORWARDING AGENT : MS MAHLER NEW ORLEANS (US) - ORIGINAL INVOICES TO BE SENT WITH TRANSPORT FOR CUSTOMS
Montant total		796.117 LFL
FACTURATION A :		<p>RF AGROCHIMIE SERVICE COMPTABLE BP 412 6948 VILLEFRANCHE SUR SAONE</p>
Date de livraison :		VOIR LES DES
		<p>Lieu de stock X</p> <p>Négociateur F. CANION</p> <p>Approvisionnement 01070367</p>

Référence à rappeler
sur tous documents

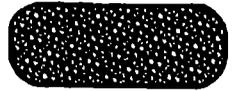
COMMANDE N°

01870487



RHÔNE-POULENC AGROCHIMIE

14-20, RUE PIERRE BAIZET B.P. 9163
69283 LYON CEDEX 09 - TEL 72 29 25 25
Svc Achats : Télax 306148 F Rhône - Fax 72 29 22 62
Svc Approvisionnement : Télax 306290 F Rhône - Fax 72 29 22 63



CACHET ET SIGNATURE DU FOURNISSEUR

LE 11 MAI 1990

CEDAR CHEMICAL CORPORATION
24TH FLOOR
5100 POPLAR AVENUE
MEMPHIS TN 38137 U.S.A.

A

La

réf. 20022-A-01-00-1

CODE	QUANTITE	DÉSIGNATION/PRIX
106131A	50	<p>A L ATTENTION DE M. GEOFFROY L. PRATT</p> <p>METHYLHIOPINACOLONE OXIME</p> <p>PRIX : 13303.0000 DOLLAR USA</p> <p>PAR TONNE</p> <p>FOB WEST HELENA</p> <p>PROV.:US ORIG.:US</p> <p>PRIX : SOIT : USD 4.90/LB + 150.000 USD FEE</p> <p>EMBALLAGE : IN DRUMS</p> <p>THIS CORRESPONDS TO A PROCESSING OF 50 MT OF MCP INTO MTPO.</p> <p>DOCUMENTS TO BE SENT TO F. DANION IN LYON :</p> <ul style="list-style-type: none"> - RECEIPT NOTES FOR MCP - BILL OF LADING (2 ORIGINALS + 4 COPIES) - INVOICES (4 EX) - ANALYSIS CERTIFICATES FOR EACH EXPEDITION - ORIGIN CERTIFICATE - CONSIGNEE : RHONE-POULENC AGROCHIMIE (1076 MAPROCHIM 50 RUE DE M. HOU BP 1093 76082 LE HAVRE FRANCE) - NOTIFIED TO MAPROCHIM LE HAVRE - DEWARDED AGENT : MG MAHLER NEW ORLEANS (US) <p>2 ORIGINAL INVOICES TO BE SENT WITH TRANSPORT FOR CUSTOMS</p>

Montant total	297.000 USD	Lieu de stock	Négociateur
FACTURATION A :	RE MAPROCHIM BP 442 69400	SERVICE COMPTABILITE VILLEFRANCHE SUR SAONE	F. DANION
Date de livraison :	VOIR -DESS	Approvisionnement	<i>[Signature]</i>

Référence à rappeler
sur tous documents

COMMANDE N°
010/C087



RHÔNE-POULENC AGROCHIMIE

14-20, RUE PIERRE BAIZET B.P. 9163
69263 LYON CEDEX 09 - TEL 72 29 25 25
Svc Achats : Télax 306148 F Rhône - Fax 72 29 22 62
Svc Approvisionnement : Télax 306290 F Rhône - Fax 72 29 22 69

RECEIVED

AUG 6 1990

Ans'd.....

LE 31 JUILLET 1990

Aux conditions générales d'achat et de paiement
figurant au verso veuillez noter notre commande.

Accusé de réception ci-joint, à retourner revêtu
de votre cachet et de votre signature par retour
du courrier à :

CEDAR CHEMICAL CORPORATION
24TH FLOOR
5100 POPLAR AVENUE
MEMPHIS TN 38137 U.S.A.

R.P. AGROCHIMIE
ATT MELLE LAMBERT BP 9163
69263 LYON CEDEX 09

RFP 82032-P-04-80-X

CODE	QUANTITÉ	DESIGNATION / PRIX
		A L ATTENTION DE M. GEOFFROY L. PRATT
		CEDAR WILL MANAGE COMPLETELY THE TRANSPORTATION TO RHONE POULENC ELBEUF AND INVOICE RHONE POULENC AGROCHIMIE FOR THESE EXPENSES
		DELIVERY DATES FOB NEW ORLEANS : 20 T WEEK 38 20 T WEEK 40 20 T WEEK 42

Montant total	798.180 USD	Lieu de stock X	Négociateur
FACTURATION A :	RP AGROCHIMIE BP 442 69400	SERVICE COMPTABILITE VILLEFRANCHE SUR SAONE	F. DANION
Date de livraison :	VOIR CI-DESSUS		Approvisionnement <i>C. Kuchet</i>

Référence à rappeler
sur tous documents

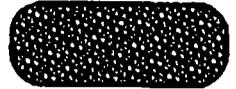
COMMANDE N°

01070927



RHÔNE-POULENC AGROCHIMIE

14-20, RUE PIERRE BAIZET B.P. 9163
69263 LYON CEDEX 09 - TEL 72 29 25 25
Soc Achats : Télax 308148 F Rhône - Fax 72 29 22 62
Soc Approvisionnement : Télax 308290 F Rhône - Fax 72 29 22 63



CACHET ET SIGNATURE DU FOURNISSEUR

LE 21 JUILLET 1990

CEDAR CHEMICAL CORPORATION
214 FLOOR
610 POPLAR AVENUE
MEMPHIS TN 38101 U.S.A

A

Le

N° 20032-P-040-X

CODE	QUANTITE	DESIGNATION / PRIX
		A L'ATTENTION DE M. GEOFFROY L. PRATT CEDAR WILL BE IN CHARGE COMPLETELY THE TRANSPORTATION TO RHONE POULENC ELBA AND INVOICE RHONE POULENC AGROCHIMIE FOR THESE EXPENSES DELIVERY DATE: FRS NEW ORLEANS : 20 1 WEEK 36 20 1 WEEK 40 20 1 WEEK 42
Montant total	798.180 USD	Lieu de stock
FACTURATION A	RP AGROCHIMIE BP 142 69400	SERVICE COMPTABILITE VILLEFRANCHE SUR SAONE
Date de livraison	VOIR CI-DESSUS	Négociateur F. DANION Approvisionneur <i>C. Kauter</i>



RHÔNE-POULENC SECTEUR AGRO	Department: R&D/CRLD/AN	Reference : 9516131	DOC Nr : 438752
			Date : 26/07/95
			GOoD ID: 8057
External Performer(s) :			

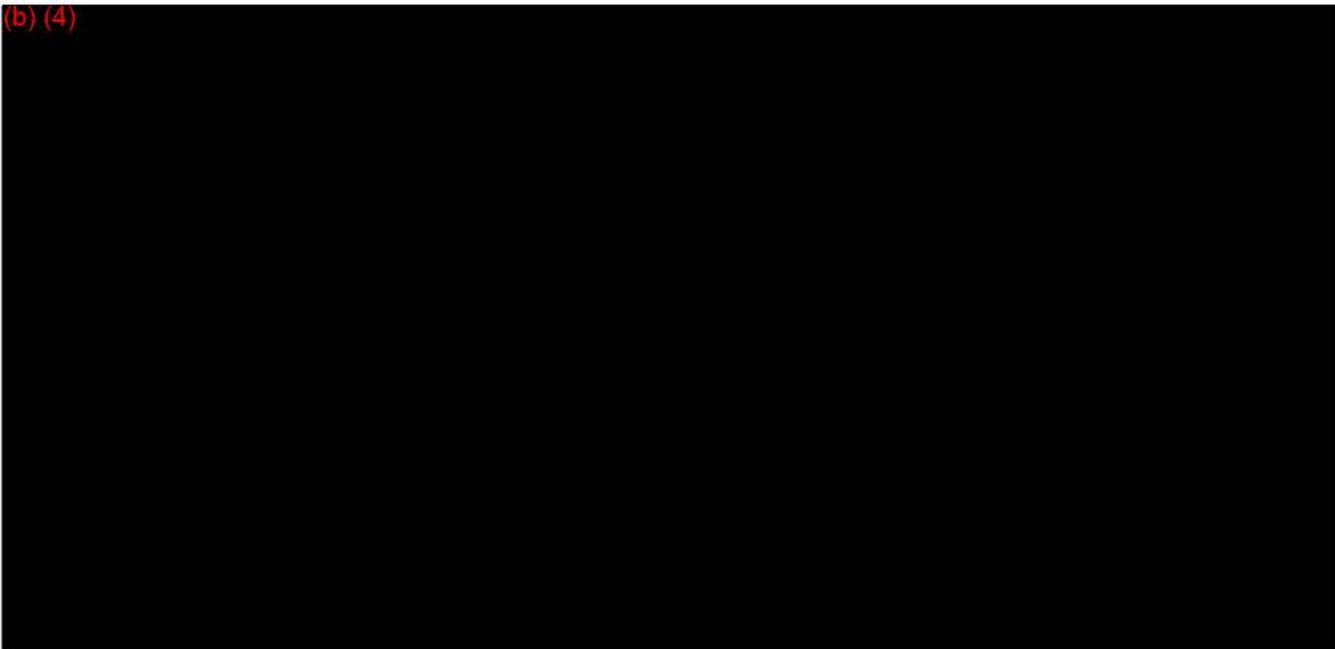
Author(s) :

Internal : **J. COUSIN**

External :

Title : TECHNICAL CYCLANILIDE

(b) (4)





RHÔNE-POULENC

BUSINESS CONFIDENTIAL

SECTEUR AGRO

RHÔNE-POULENC AGROCHIMIE
14-20 RUE PIERRE BAZET B.P. 9163
69263 LYON CEDEX 09
TEL. 72.29.25.25 - FAX 72.29.29.67
TLX 306142 RHÔNE

Technical Cyclanilide
HPLC determination of
2,4 dichloroaniline, RPA 090899, RPA 090945,
RPA 093903, RPA 111030 and RPA 114924

Research and Development

Centre de Recherche de La Dargoire

Method C-821-07-95 (E)

Date : 28/07/1995

Author : J. COUSIN

28/07/95
J. Cousin

Approved by : J. COUSIN

The information herein is CONFIDENTIAL and is the property of RHÔNE-POULENC SECTEUR AGRO. It is provided for the sole purpose of supporting the application for registration and may not be disclosed to other parties nor be used for any other purpose.

Until published, the information in this report should not be cited or used in any way without the prior permission of RHÔNE-POULENC SECTEUR AGRO.



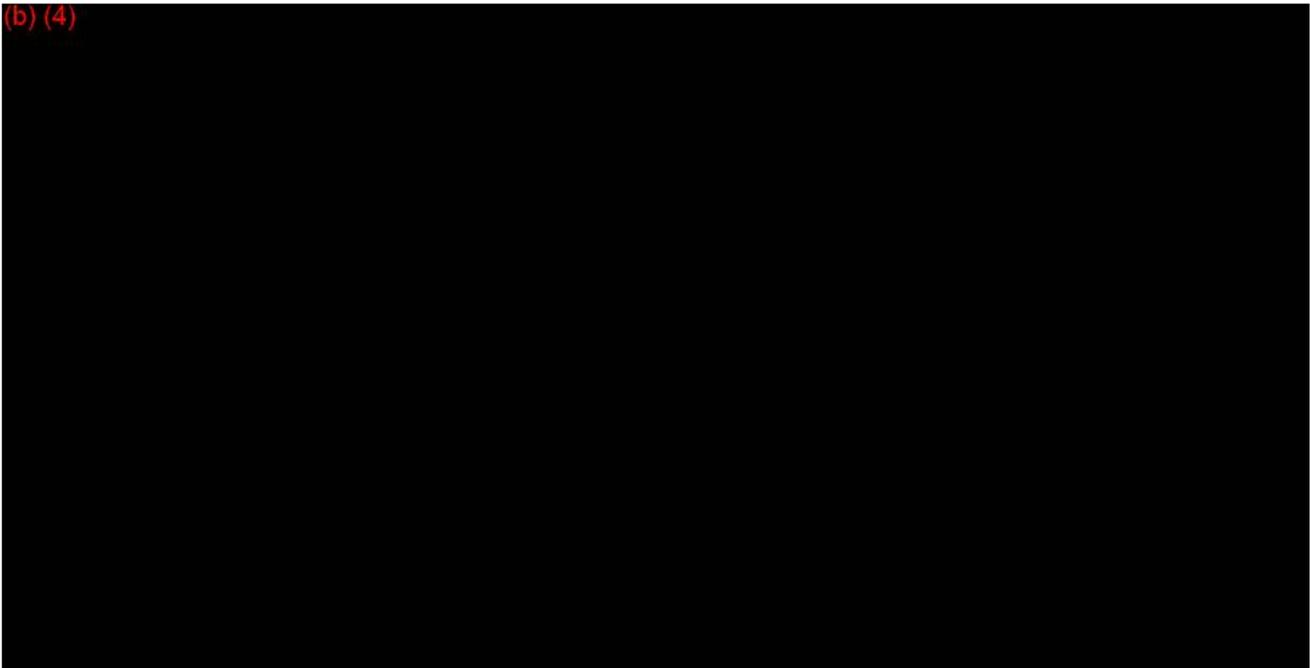
RHÔNE-POULENC SECTEUR AGRO	Department:	Reference :	DOC Nr : 438752
	R&D/CRLD/AN	9516131	Date : 26/07/95
			GOoD ID: 8057
External Performer(s) :			

Author(s) :

Internal : J. COUSIN

External :

Title : TECHNICAL CYCLANILIDE



**RHÔNE-POULENC****BUSINESS CONFIDENTIAL****SECTEUR AGRO**

RHÔNE-POULENC AGROCHIMIE
14-20 RUE PIERRE BAIZET B.P. 9163
69263 LYON CEDEX 09
TEL. 72.29.25.25 - FAX 72.29.29.67
TLX 306147 F RHÔNE

Technical Cyclanilide**HPLC determination of**

**2,4 dichloroaniline, RPA 090899, RPA 090945,
RPA 093903, RPA 111030 and RPA 114924**

Research and Development**Centre de Recherche de La Dargoire****Method C-821-07-95 (E)**

Date : 28/07/1995

Author : J. COUSIN

Approved by : J. COUSIN

28/07/95
J. Cousin

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RHONE-POULENC

RECU D.L.F./D.L.P.

22 OCT. 1999

BUSINESS CONFIDENTIAL

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RHÔNE-POULENC SECTEUR AGRO	Department:	Reference :	DOC Nr : 438752
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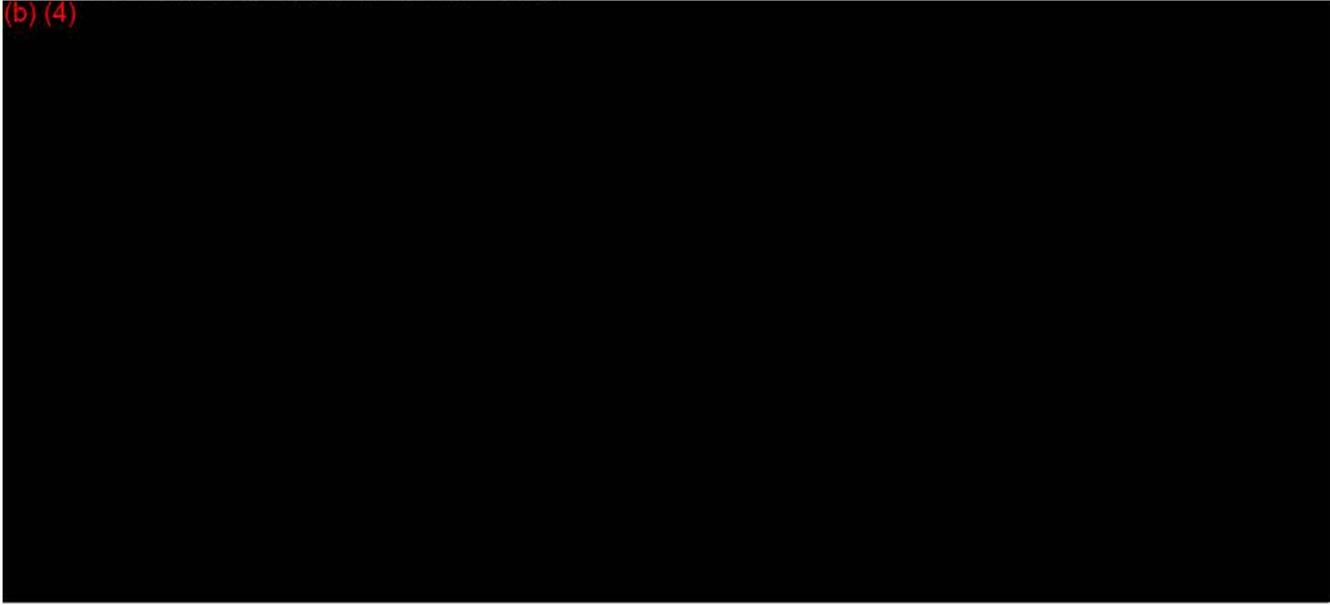
Author(s) :

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External :

Title : TECHNICAL CYCLANILIDE

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RHÔNE-POULENC

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SECTEUR AGRO

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Technical Cyclanilide
HPLC determination of
2,4 dichloroaniline, RPA 090899, RPA 090945,
RPA 093903, RPA 111030 and RPA 114924

Research and Development
Centre de Recherche de La Dargoire

Method C-821-07-95 (E)

Date : 28/07/1995

Author : J. COUSIN

28/07/95
J. Cousin

Approved by : J. COUSIN

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CEDAR - WEST HELENA
 Raw materials used - Finish goods used - Packaged - Mfg -
 Shipments - Receipts
 5/31/86

CC C McGe
 E. White
 B. Christian

P Fields
 File Copy

Item No	Std Factor	Usage Factor	Raw Materials Used	Finish Goods			Mfg'd	Dr		Cr			
				Used	Pkg'd								
DCA	3020						1,208,684	S 701	1420	1,281,205.04	C 153	6740	(1,281,205.04)
DCCB	41000	1.1500	0.9899	1,208,505				C 153	5620	447,146.85	S 703	1460	(447,146.85)
Nitric Acid	41020		0.4488	542,257				C 153	5640	86,761.12	S 705	1460	(86,761.12)
Sulfuric Acid	41010		0.8643	1,044,680				C 153	5630	41,787.20	S 704	1460	(41,787.20)
Plat/Carb Cat	41070		0.0002	301							S 711	1460	(25,886.00)
Hydrogen	41030		0.0454	54,839				C 153	5670	61,968.07	S 706	1460	(61,968.07)
Soda Ash	41050		0.0006	738				C 153	5650	29,265.20	S 708	1460	(95.68)
Lime	41060		0.0207	25,000							S 709	1460	(1,750.00)
50% Rayon Caustic	45090		0.0094	11,382							S 792	1460	(683.52)
Hydrogen Peroxide	41090		0.0021	2,500							S 790	1460	(650.00)
Methanol	42840		0.0300								S 735	1460	
TEPA													
Ferrous Sulfate			0.0001	113									
Propand Tech	3000						1,882,839	S 702	1420	2,014,637.73	C 154	6740	(2,014,637.73)
DCA-3rd Party	40100		0.755					C 154	5630		S 710	1460	
DCA-Cedar	3020		0.787				1,444,164	C 154	6840	1,530,813.84	S 701	1420	(1,530,813.84)
P Acid	40200		0.278	522,870				C 154	5840	158,881.00	S 712	1460	(158,881.00)
P Anhy	40300		0.059	174,408				C 154	5650	160,455.38	S 714	1460	(160,455.38)
Flated Tech	3050						145,500	S 804	1420	158,595.00	C 155	6740	(158,595.00)
P Tech	3000	1.000	1.000				145,500	C 155	6810	155,685.00	S 702	1420	(155,685.00)
3#	3200						29,789	S 802	1420	191,543.27	C 161	6740	(191,543.27)
P Tech	3000	3.218	3.218				95,801	C 161	6810	102,507.07	S 702	1420	(102,507.07)
Isoph	40500	2.250	1.947	57,980				C 161	5680	41,752.80	S 717	1460	(41,752.80)
MO	40400							C 161	5680		S 716	1460	
Emul	40600		0.175	5,220				C 161	5670	3,654.00	S 718	1460	(3,654.00)
Aromatic B	40800	1.759	1.810	53,808				C 161	5685	9,164.02	S 719	1460	(9,164.02)
Armud	40900	1.242	1.085	32,320				C 161	5675	21,654.40	S 720	1460	(21,654.40)
Sun Od	41640	450	0.418	12,480				C 161	5650	1,993.60	S 769	1460	(1,993.60)
Tenneco 500	45320							C 161	5685		S 797	1460	
Cone Blend													
Stepfac													
4#	3300						179,838	S 817	1420	1,361,373.66	C 162	6740	(1,361,373.66)
P Tech	3000	4.127	4.132				743,153	C 162	6810	785,173.71	S 702	1420	(785,173.71)
F Tech	3060							C 162	6835		S 804	1420	
Isoph	40500		0.723	129,973				C 162	5680	83,580.58	S 717	1460	(83,580.58)
M O	40400	3.065	2.793	502,277				C 162	5680	298,343.43	S 716	1460	(298,343.43)
Emul	40800	890	0.809	183,525				C 162	5670	114,467.50	S 718	1460	(114,467.50)
Iso/Mibk	41080			38,780				C 162	5780	24,825.60	S 721	1460	(24,825.60)
Aromatic B	40800							C 162	5685		S 719	1460	
Armud	409000							C 162	5675		S 720	1460	
4# X	3300						28,710	S 817	1420	224,904.70	C 162	6740	(224,904.70)
P Tech	3000	4.127	4.159				123,575	C 162	6810	132,225.25	S 702	1420	(132,225.25)
M O	40400	1.738	1.672	49,680				C 162	5660	29,311.20	S 716	1460	(29,311.20)
Isoph	40500	1.738	1.672	49,680				C 162	5680	35,769.80	S 717	1460	(35,769.80)
Emul	40600	1.000	0.778	23,120				C 162	5670	16,184.00	S 718	1460	(16,184.00)
Aromatic B	40800							C 162	5685		S 719	1460	
Armud	40900		0.374	11,118				C 162	5675	7,447.72	S 720	1460	(7,447.72)
Sun Od	41640	.400	0.392	11,650				C 162	5650	1,864.00	S 769	1460	(1,864.00)
8#	3400						133,806	S 811	1420	1,066,433.62	C 170	6740	(1,066,433.62)
P Tech	3000	4.127	4.134				553,180	C 170	6810	591,802.60	S 702	1420	(591,802.60)
F Tech	3060							C 170	6835		S 804	1420	
Isoph/Mibk	41080	3.828	3.821	511,280				C 170	5780	327,208.40	S 721	1460	(327,208.40)
Emul	40600	.803	0.877	117,280				C 170	5670	82,103.00	S 718	1460	(82,103.00)
Isoph	40500							C 170	5680		S 717	1460	
MO	40400							C 170	5660		S 716	1460	

Item Descript	Item No	Total Qty's							
		R/M's	F/G's						
Propanil Tech	3000								
Fisloc Tech	3050								
Isoph	40500	237,843							
Emul	40600	308,155							
Armud	40900	43,438							
M O	40400	551,967							
Aromatiz B	40600	53,808							
Isoph/Mibk	41080	550,050							
Sun Od	41640	24,110							
Tenneco 500	43320								
# Packaged:	Item No	Mt Drms	Bulk	Full Drms					
# 50L	3190	13 210			S 854	1420		C 167	6740 (240,735.58)
# 55's	3210	55 000		81	S 806	1420	23,753 40		
# 200L's	3250	52 840		580	S 807	1420	218,982 18		
# 35's	10010	35,000			S 838	1420			
Propanil 360 210L's	10020	55 480			S 826	1420			
Propanil 360 200L's	10030	52 840			S 825	1420			
Supernox 360 200L	10040	52 840			S 830	1420			
# Bulk	3200		34,002	34,001	C 167	6820	218,626 43	S 802	1420 (218,626 43)
# 20L Used	3220							S 819	1420
# 200L Used	3250							S 807	1420
IS's	42210				C 1067	5890	23,549 40	S 738	1460
ISM's	42300	1,068						S 742	1460 (23,549 40)
IS M's Black	42550							S 758	1460
# 20L	3220	5 280		190	S 819	1420	7,108 04	C 160	6740 (7,108 04)
# Bulk	3200		1,003	1,004	C 160	6820	6,455 72	S 802	1420 (6,455 72)
#t 20L	42000		215		C 1069	5890	849 25	S 739	1460 (849 25)
# Packaged:	Item No	Mt Drms	Bulk	Full Drms					
Propanex 500	3280				S 829	1420		C 169	6740 (1,433,005 68)
Propanil 4# 20L	3290	5 280		190	S 812	1420	8,306 50		
# 55's	3310	55 000		413	S 816	1420	188,080 20		
Propanil 4# 210L	3320	55 480			S 838	1420			
Propanil 4# 200L	3330	52 840		118	S 839	1420	51,626 79		
Cedar Blue Drum 35 gal	3340	35 000		4,089	S 814	1420	1,184,982 20		
Propanex 35	4310	35 000			S 814	1420			
Supernox 480 200L	10050	52 840			S 835	1420			
4# bulk	3300		173,068	173,068	C 169	6830	1,310,124 76	S 817	1420 (1,310,124 76)
35 m's	42210				C 1069	5890	80,263 15	S 738	1460
Mt 20L	42000	215						S 739	1460 (849 25)
35 m's Plastic	42230	4,152						S 793	1460 (76,812 00)
55 m's	42300	118						S 742	1460 (2,601 90)
55 m's	42550							S 756	1460
Stam Packaged:	Item No	Mt Drms	Bulk Used	Full Drms					
Stam 35's	3420	35 000		1,431	S 813	1420	435,238 65	C 172	6740 (435,238 65)
bulk	3400		50,085	50,085	C 172	6825	399,177 45	S 811	1420 (399,177 45)
35 m's	42220				C 1072	5890	25,425 40	S 780	1460 (23,425 40)
Duron Prod'n:	Item No	Std	Act	R/M Used	F/G Prod				
Duron	3030				127,800			S 816	1420 331,002 00 C 157 6740 (331,002 00)
DCPI	40150	8300	8435	107,800				C 157	5835 254,408 00 S 715 1460 (254,408 00)
DMA	41650	2100	2081	28,600				C 157	5810 17,024 00 S 744 1460 (17,024 00)
Heptane	41680	.0700	0905	11,580				C 157	5850 2,427 60 S 745 1460 (2,427 60)
Sulfuric Acid	41520								S 762 1460
50% Rayon Caustic	45090								S 782 1460
Ethephon Prod'n:	Item No	Std	Act	R/M Used	F/G Prod				
Ethephon	15740							S 851	1420 100% AJ C 187 6740
Ethylene Oxide	48210	1.186						C 187	5715 S 822 1460
Phosphorus Trichloride	48220	1.242						C 187	5725 S 823 1460
Anhydrous Hydr Chloride	48200	.650						C 187	5735 S 821 1460
Sulfuric Acid	41010	1.087						C 187	5830 S 704 1460
50% Caustic	41530	1.189						C 187	5850 S 763 1460

*Note: Difference between reported Production and shipping weights

Acfluorfen Prod'n:	Item No	Std	Act	R/M Used	F/G Prod								
Acfluorfen	5120				218,340	100% AI							
Mixed Nitric Acid	41700	0 7450	0 7013	151,709			C 182	5850	86,725.79	S 808	1460	(18,687.89)	
Acetic Anhydride	41710	0.5800	0 5961	128,970						S 807	1460	(54,167.40)	
Sulfuric Acid	41010						C 182	5530		S 704	1460		
Ethylene Dichloride	41720	0 0550	0 1050	22,720						S 808	1460	(4,998.40)	
50% Caustic	41530	0 5200	1 2060	260,900						S 783	1460	(20,872.00)	
Rock Salt	45350									S 801	1460		
R11B118	90200	3 5400	2 9629	641,000									
FA Prod'n:	Item No	Std	Act	R/M Used	F/G Prod								
FA Prod'n:	17000				23,720					S 849	1420	(87,784.00)	
Nitromethane	42680	.8600	4594	10,698			C 183	5580	15,039.24	S 787	1460	(15,039.24)	
Formaldehyde	41540	2 8000	- 7202	-17,083			C 183	5590	(1,879.13)	S 764	1460	1,879.13	
Methanol	42640	2460	9798	23,240			C 183	5860	3,021.20	S 735	1460	(3,021.20)	
Sulfonic Acid	41520	0660								S 762	1460		
Raney Nickel	42690	0110					C 183	5600		S 788	1460		
Hydrogen	41030	1420					C 183	5570		S 706	1460		
50% Caustic	41530	1300								S 792	1460		
FMG 5-Nitro Prod'd:	Item No	Std	Act	R/M Used	F/G Prod								
5-Nitro	5290				30,813	100% AI							
Step 3	90800		4 0991	128,305									
Step 4	90810		0 0299	921									
Step 5	90820												
Chlorine	90720		0.6088	18,758									
A Sulfate	90710		1 0260	31,613									
G Acid	90700		0 4099	12,629									
50% Caustic	45090		1 2488	38,480			S 8000	1230	2,308.80	S 792	1460	(2,308.80)	
20% Oleum	90770		4 0763	125,602									
Methanol	90790		1 2941	39,874									
Soda Ash	90740		0 3310	10,200									
Toluene	90760		4 8457	149,312									
93% Sulfuric Acid	90750												
Mixed Acid	90730		0 4265	13,142									
Packaged Plant:	Item No	Std	Act	R/M's	F/G's	Cases	Gals/Lbs						
Pure Trom 25 Kg Pkg'd	17120					-67	(3,693)	C 183	8740	13,664.25	S 843	1420	(13,664.25)
Tromethamine Bulk Used	17000				(3,693)			C 183	6860	(13,664.10)	S 849	1420	13,664.10
Trometamol 25 Kg	17220							S 845	1420		C 181	6740	
Trometamol 50 Kg	17240							C 181	6740		S 847	1420	
Tris Ultr Pure 100Kg	17250							C 181	6740		S 853	1420	
Pure Tris-Hcl 100Kg	17260							C 181	6740		S 855	1420	
Tromethamine Bulk Used	17000							C 181	6860		S 849	1420	
Wham Packaged:	Item No	Std	Act	R/M's	F/G's	Cases	Gals/Lbs						
Wham 2x2.5	3180					1	5	S 832	1420	38.95	C 184	6740	(723,702.84)
Wham 100L	3230							S 828	1420				
Wham 30	3240					723	21,690	S 805	1420	168,965.10			
S Wham 30	3350					2,240	67,200	S 831	1420	523,488.00			
S Wham 2x2.5's	3360					1	5	S 834	1420	38.95			
S Wham Bulk	3370						4,544	S 856	1420	31,171.64			
S Wham 2x2.5's Used	3360							C 184	6835		S 834	1420	
Flaked Tech	3050	4 124	2 5042		234,000			C 164	6835	255,080.00	S 804	1420	(255,080.00)
Morwet	41460	097	0 1173	10,859				C 164	5850	97,854.34	S 726	1460	(11,835.72)
Polyfon O	41470	010	0 0029	273						S 727	1460	(169.26)	
Glycerine	41480	.243	0 1457	13,705						S 728	1460	(8,223.00)	
Alfonic	41490	389								S 729	1460		
Kelzan	41510	005	0 0054	507						S 781	1460	(2,687.10)	
Veegum	41570	117	0 1869	15,600						S 731	1460	(28,860.00)	
Antifoam DC 1500	45140	001	0.0045	421						S 785	1460	(2,513.37)	
Technical Cerbyl	41670	007	0 0038	353						S 757	1460	(1,323.75)	
Ethephon	41680	004	0 0023	218						S 781	1460	(734.68)	
Soprophor 40384	41690	148	0.2358	22,032						S 809	1460	(41,189.84)	
C8nc Acid	41590		0 0013	117						S 787	1460	(107.64)	
30 m's	42100			2,863				C 164	5870	48,970.35	S 752	1460	(48,983.55)
2.5 m's	44200			5						S 759	1460	(6.80)	

Bandit Packaged:	Item No	Std	Act	R/M's	F/G's	Cases/Drums	Gals/Lbs							
Bandit 200L	3140							S	820	1420		C	168	6740
Flaked Tech	3050	2.4100						C	168	6835		S	804	1420
Butachlor	45200	2.4400						C	168	5850		S	794	1460
sophorone	40500	2.8800						C	168	5680		S	717	1460
Amul	40900	1.0000						C	168	5875		S	720	1460
35 ml's	42300							C	1068	5890		S	742	1460
2.5 ml's	44200											S	759	1460
Total Flaked Tech Used	3050				234,000									
Flake Tech Packaged:	Item No	Std	Act	R/M's	F/G's	Cases	Gals/Lbs							
Flake Tech 25Kg	3060					200	11,020	S	822	1420	14,105.60	C	155	6740
Flake Tech Used	3050		1.0109		11,140			C	155	6835	12,142.60	S	804	1420
Duron Col Packaged:	Item No	Std	Act	R/M's	F/G's	Cases	Gals/Lbs							
Duron Col 224 Kg	3070							S	848	1420		C	158	6740
Duron	3030	.5820						C	158	6865		S	816	1420
Arquad 18/28	45100	0.650						C	158	5850		S	781	1460
Arquad 2C75	45120	0.020										S	783	1460
regalite Blue Dye	45130	.0020										S	784	1460
DC 1500 Antifoam	45140	0.010										S	785	1460
Drum 55 Gal	45150							C	1058	5890		S	786	1460
Butox 7500 Packaged:	Item No	Std	Act	R/M's	F/G's	Cases	Gals/Lbs							
Butoxone DF 7500	15580							S	420	1420		C	420	6740
2,4 D-B Acid	41550	.7850						C	420	5510		S	765	1460
Continental Clay	41620	.1640						C	420	5850		S	746	1460
-8 Sil 233	41500	0.050						C				S	737	1460
Stepspere DF 200	41600	.0600						C				S	740	1460
Stepwet DF 95	41610	0.050						C				S	743	1460
Butox 175 Packaged:	Item No	Std	Act	R/M's	F/G's	Cases	Gals/Lbs							
Butoxone 175 4x1	15260							S	410	1420		C	410	6740
Butox 200 Bulk Used	15200	0.8152						C	410	6850		S	430	1420
2,4, D B Acid	41550	1.8000						C	410	5510		S	765	1460
60% DMA	41580	0.8000						C	410	5700		S	766	1460
Citric Acid	41590	0.2800						C	410	5705		S	767	1460
Jugs	44100							C	410	5870		S	749	1460
Butoxone 175 2x2.5	15240					383	1,915	S	410	1420	23,401.30	C	410	6740
Butox 200 Bulk Used	15200	0.8152						C	410	6850		S	430	1420
2,4, D B Acid	41550	1.8000	1.8816	3,565				C	410	5510	16,684.20	S	765	1460
60% DMA	41580	0.8000	0.9217	1,785				C	410	5700	1,059.00	S	766	1460
Citric Acid	41590	0.2800	0.2507	480				C	410	5705	441.60	S	767	1460
Jugs	44200			766				C	410	5870	1,041.76	S	759	1460
Butoxone 175 55	15270							S	410	1420		C	410	6740
Butox 200 Bulk Used	15200	0.8152						C	410	6850		S	430	1420
2,4, D B Acid	41550	2.0600						C	410	5510		S	765	1460
60% DMA	41580	1.1000						C	410	5700		S	766	1460
Citric Acid	41590	0.4200						C	410	5705		S	767	1460
Butox 200 Packaged:	Item No	Std	Act	R/M's	F/G's	Cases	Gals/Lbs							
Butoxone 200 4x1	15560							S	430	1420		C	430	6740
Butox 200 Bulk Used	15200	1.0000						C	430	6850		S	824	1420
2,4, D B Acid	41550	2.0600						C	430	5510		S	765	1460
60% DMA	41580	1.1000						C	430	5700		S	766	1460
Citric Acid	41590	0.4200						C	430	5705		S	767	1460
Jugs-1 gal plastic	44100							C	430	5870		S	749	1460
HCC-Cordelle Cont'd:														
Butoxone 200 2x2.5	15540					1,785	8,825	S	430	1420	122,094.00	C	430	6740
Butox 200 Bulk Used	15200	1.0000						C	430	6850		S	824	1420
2,4, D B Acid	41550	2.0600	2.2073	19,700				C	430	5510	92,198.00	S	765	1460
60% DMA	41580	1.1000	1.1681	10,425				C	430	5700	6,255.00	S	766	1460
Citric Acid	41590	0.4200	0.4230	3,775				C	430	5705	3,473.00	S	767	1460
Jugs-2.5 gal plastic	44200			3,570				C	430	5870	4,655.20	S	759	1460
Butoxone 200 55	15570							S	430	1420		C	430	6740
Butox 200 Bulk Used	15200	1.0000						C	430	6850		S	824	1420
2,4, D B Acid	41550	2.0600						C	430	5510		S	765	1460
60% DMA	41580	1.1000						C	430	5700		S	766	1460
Citric Acid	41590	0.4200						C	430	5705		S	767	1460

Shipped from Plant:

	Item No	Location		Containers	lbs/gals
Prop Tech	3000	4	Plant		155,660
DCA	3020	4	Plant		
Duron	3030	4	Plant		62,400
Flake Tech	3050	4	Plant		
Flake Tech 25KG	3060	4	Plant		
3# 50 L	3180	4	Plant		
3# Bulk	3200	4	Plant		
3# 55's	3210	4	Plant	61	3,355
3# 20L	3220	4	Plant	961	5,078
3# 200L	3250	4	Plant	629	33,236
Propanex 500 55's	3260	4	Plant		
4# 20L	3290	4	Plant	180	1,003
4# Bulk	3300	4	Plant		28,912
4# 55's	3310	4	Plant	414	22,770
4# 210 L	3320	4	Plant		
4# 200 L	3330	4	Plant	215	11,361
4# 35's	3340	4	Plant	4,117	144,065
Stam Bulk	3400	4	Plant		94,368
Stam 35's	3420	4	Plant	1,430	50,050
Propanil 3# 35's	10010	4	Plant		
Propanil 360 210L	10020	4	Plant		
Propanil 360 200L	10030	4	Plant		
Superox 360 200L	10040	4	Plant		
Superox 480 200L	10050	4	Plant		
Ethephon 100%	15740	4	Plant		
Tromethamine Bulk	17000	4	Plant		
Tham 25 KG	17020	4	Plant		
Tromethamine 25KG	17120	4	Plant	40	2,205
Trometamol 50KG	17240	4	Plant		
Tra Ultra Pure 100Kg	17250	4	Plant		
Pure Tria-Hcl 100Kg	17280	4	Plant		
4# Emul	40600	4	Plant		
Emul	40900	4	Plant		
Isoph	40500	4	Plant		
TA-40 Waste Water		4	Plant		

Shipped from O/S Plant:

	Item No	Location		Containers	lbs/gals
Duron	3030	10	B/H		31,200
Duron	3030	52	Gulf States		42,857
Duron	3030	97	In Transit		
Duron Col 248 Kg	3040	86	Odom		
Flaked Tech	3050	10	B/H		(534,000)
Flaked Tech	3050	86	Odom		(123,000)
Flaked Tech 25Kg	3060	78	Odom-Pachuta	200	11,020
Flaked Tech 25Kg	3060	86	Odom		
Duron Col 224 Kg	3070	86	Odom		
Bandit 200L	3140	68	Odom		
Wham! EZ 2x2 5 gal	3180	10	B/H		
Wham! EZ 2x2 5 gal	3180	68	Odom		
Wham 100 Liter	3230	68	Odom		
Wham 30gls	3240	10	B/H	(27)	(810)
Wham 30gls	3240	59	Rice Farmers		
Wham 30gls	3240	86	Odom	530	15,900
Wham 30gls	3240	88	Amer Rice		
Wham 5gls	3260	10	B/H		
Wham 5gls	3260	86	Odom		
Wham 5gls	3260	88	Amer Rice		
4# 35	3340	10	B/H		
4# 35	3340	15	Amer Whae		
4# 35	3340	59	Rice Farmers		
Super Wham 30	3350	10	B/H	1,908	57,240
Super Wham 30	3350	15	Amer Whae		
Super Wham 30	3350	59	Rice Farmers		
Super Wham 30	3350	86	Odom	1,100	33,000
Super Wham 2x2 5	3360	10	B/H		

Shipped from O/S Plant Confd:

Item No	Location	Containers	lbs/gals
3060	86 Odorn	(196)	(980)
3370	86 Odorn		4,544
3420	10 B/H		
4310	86 Odorn		
15200	57 HCC-Cordete		
15240	10 B/H		
15240	20 Gray-Albany	324	1,620
15240	21 Gray-Ashburn	288	1,440
15240	30 AWS		
15240	57 HCC-Cordete		
15260	10 B/H		
15260	20 Gray-Albany	216	864
15260	21 Gray-Ashburn	828	3,312
15260	30 AWS		
15260	57 HCC-Cordete		
15540	10 B/H	72	360
15540	15 American W/H		
15540	20 Gray-Albany		
15540	21 Gray-Ashburn	108	540
15540	30 AWS	72	360
15540	35 Robertson	360	1,800
15540	57 HCC-Cordete	216	1,080
15560	10 B/H		
15560	15 American W/H		
15560	20 Gray-Albany		
15560	21 Gray-Ashburn	180	720
15560	30 AWS	36	144
15560	35 Robertson		
15560	57 HCC-Cordete		
15580	10 B/H		
15580	15 American W/H		
15580	20 Gray-Albany		
15580	21 Gray-Ashburn	96	2,237
15580	86 Odorn		
15700	10 B/H		
15700	20 Gray-Albany		
15700	78 Odorn-Pachuta		
15730	10 B/H		
15730	78 Odorn-Pachuta		
15740	78 Odorn-Pachuta		
15740	21 Gray-Ashburn		

Transfers:	Item No	From	To	Cases/Drums	Gals/Lbs
DCA	3020	4 PR	97 In Trans		42,218
DCA	3020	97 In Trans	4 PR		386,032
Duron	3030	4 PR	10 B/H		
Duron	3030	4 PR	86 Odorn		
Duron	3030	10 B/H	4 PR		
Duron	3030	10 B/H	86 Odorn		
Duron	3030	86 Odorn	78 Odorn-Pachuta		
Duron	3030	97 In Trans	52 Gulf States		
Flake Tech	3050	4 PR	10 B/H		
Flake Tech	3050	4 PR	58 HCC-W/H		
Flake Tech	3060	4 PR	78 Pachuta		12,000
Flake Tech	3050	4 PR	86 Odorn		99,000
Flake Tech	3050	10 B/H	4 PR		
Flake Tech	3050	10 B/H	86 Odorn		
Flake Tech	3050	10 B/H	58 HCC-W/H		
Flake Tech	3050	10 B/H	78 Pachuta		
Flake Tech	3050	86 Odorn	10 B/H		
Flake Tech	3050	86 Odorn	78 Odorn-Pachuta		
Flake Tech 25KG	3060	86 Odorn	4 PR		
Flake Tech 25KG	3060	86 Odorn	78 Odorn-Pachuta		
Flake Tech 25KG	3060	4 PR	86 Odorn		

transfers Cont'd:	Item No	From	To	Cases/Drums	Gals/Lbs
uron Col 224 Kg	3070	86	Odom	78	Odom-Pachuta
andil 200L	3140	78	Odom-Pachuta	86	Odom
vham 2x2 5	3180	10	B/H	4	Pt
vham 2x2 5	3180	10	B/H	86	Odom Ind
vham 2x2 5	3180	86	Odom Ind	4	Pt
vham 2x2 5	3180	86	Odom Ind	10	B/H
# 20L	3220	25	Platte	4	Pt
# 20L	3220	4	Pt	25	Platte
Vham 30	3240	4	Pt	86	Odom
Vham 30	3240	4	Pt	10	B/H
Vham 30	3240	10	B/H	59	Rice Farmers
Vham 30	3240	10	B/H	86	Odom
Vham 30	3240	10	B/H	88	American Rice
Vham 30	3240	59	Rice Farmers	10	B/H
Vham 30	3240	86	Odom Ind	4	Pt
Vham 30	3240	86	Odom Ind	10	B/H
Vham 30	3240	86	Odom Ind	59	Rice Farmers
Vham 30	3240	86	Odom Ind	86	Amer Rice
Vham 30	3240	88	Amer Rice	10	B/H
Vham 5	3260	4	Pt	86	Odom
Vham 5	3260	4	Pt	10	B/H
Vham 5	3260	10	B/H	4	Pt
Vham 5	3260	10	B/H	86	Odom Ind
Vham 5	3260	86	Odom Ind	88	American Rice
Vham 5	3260	86	Odom Ind	10	B/H
Vham 5	3260	86	Odom Ind	4	Pt
Vham 5	3260	88	American Rice	10	B/H
# 35's	3340	4	Pt	10	B/H
# 35's	3340	4	Pt	15	American
# 35's	3340	4	Pt	59	Rice Farmers
# 35's	3340	10	B/H	4	Pt
# 35's	3340	10	B/H	15	American
# 35's	3340	15	American	4	Pt
# 35's	3340	59	Rice Farmers	4	Pt
# 35's	3340	59	Rice Farmers	10	B/H
# 35's	3340	88	American Rice	4	Pt
Super Vham 30	3350	4	Pt	10	B/H
Super Vham 30	3350	10	B/H	15	Amer Whse
Super Vham 30	3350	10	B/H	59	Rice Farmers
Super Vham 30	3350	10	B/H	86	Odom
Super Vham 30	3350	15	Amer Whse	86	Odom
Super Vham 30	3350	15	Amer Whse	10	B/H
Super Vham 30	3350	59	Rice Farmers	10	B/H
Super Vham 30	3350	86	Odom Ind	4	Pt
Super Vham 30	3350	86	Odom Ind	10	B/H
Super Vham 30	3350	86	Odom Ind	15	Amer Whse
Super Vham 30	3350	86	Odom Ind	59	Rice Farmers
Super Vham 2x2.5	3360	4	Pt	10	B/H
Super Vham 2x2 5	3360	4	Pt	86	Odom Ind
Super Vham 2x2 5	3360	10	B/H	4	Pt
Super Vham 2x2.5	3380	10	B/H	86	Odom Ind
Super Vham 2x2 5	3360	78	Odom-Pachuta	86	Odom Ind
Super Vham 2x2.5	3360	86	Odom Ind	4	Pt
Super Vham 2x2.5	3360	86	Odom Ind	10	B/H
Super Vham 2x2.5	3360	86	Odom Ind	78	Pachuta
Stam 35	3420	4	Pt	10	B/H
Stam 35	3420	10	B/H	4	Pt
Butox 200 Bulk	15200	97	In Transit	57	HCC Cordele
Butox 175 2x2 5	15240	11	Cascio	10	B/H
Butox 175 2x2.5	15240	21	Gray-Ashburn	10	B/H
Butox 175 2x2.5	15240	21	Gray-Ashburn	20	Gray-Albany
Butox 175 2x2 5	15240	21	Gray-Ashburn	57	HCC Cordele
Butox 175 2x2.5	15240	21	Gray-Ashburn	30	AWS
Butox 175 2x2.5	15240	57	HCC-Cordele	10	B/H

300 9,000

1,159 34,770

1,300 39,000

504 2,520

Transfers Cont'd:	Item No	From	To	Cases/Drums	Gals/Lbs
Butax 175 2x2 5	15240	57 HCC-Cordele	20 Gray-Albany		
Butax 175 2x2 5	15240	57 HCC-Cordele	21 Gray-Ashburn		
Butax 175 2x2.5	15240	57 HCC-Cordele	30 AWS		
Butax 175 4x1	15260	10 B/H	4 Pt		
Butax 175 4x1	15260	10 B/H	21 Gray-Ashburn		
Butax 175 4x1	15260	20 Gray-Albany	10 B/H		
Butax 175 4x1	15260	20 Gray-Albany	21 Gray-Ashburn		
Butax 175 4x1	15260	20 Gray-Albany	30 AWS		
Butax 175 4x1	15260	21 Gray-Ashburn	10 B/H		
Butax 175 4x1	15260	21 Gray-Ashburn	11 Casco	360	1,440
Butax 175 4x1	15260	21 Gray-Ashburn	20 Gray-Albany	360	1,440
Butax 175 4x1	15260	21 Gray-Ashburn	30 AWS		
Butax 175 4x1	15260	21 Gray-Ashburn	57 HCC-Cordele		
Butax 175 4x1	15260	30 AWS	20 Gray-Albany		
Butax 175 4x1	15260	57 HCC-Cordele	10 B/H		
Butax 175 4x1	15260	57 HCC-Cordele	20 Gray-Albany	1,205	4,820
Butax 175 4x1	15260	57 HCC-Cordele	21 Gray-Ashburn		
Butax 175 4x1	15260	57 HCC-Cordele	30 AWS		
Butax 200 2x2.5	15540	10 B/H	15 American		
Butax 200 2x2.5	15540	10 B/H	35 Robertson		
Butax 200 2x2 5	15540	10 B/H	57 HCC-Cordele		
Butax 200 2x2 5	15540	11 Casco	10 B/H		
Butax 200 2x2 5	15540	11 Casco	30 AWS		
Butax 200 2x2 5	15540	11 Casco	57 HCC-Cordele		
Butax 200 2x2 5	15540	15 American	57 HCC		
Butax 200 2x2 5	15540	20 Gray-Albany	4 Pt		
Butax 200 2x2 5	15540	20 Gray-Albany	15 American		
Butax 200 2x2 5	15540	20 Gray-Albany	35 Robertson		
Butax 200 2x2 5	15540	21 Gray-Ashburn	15 American		
Butax 200 2x2 5	15540	21 Gray-Ashburn	30 AWS		
Butax 200 2x2 5	15540	21 Gray-Ashburn	35 Robertson		
Butax 200 2x2 5	15540	21 Gray-Ashburn	15 American		
Butax 200 2x2 5	15540	30 AWS	15 American		
Butax 200 2x2 5	15540	35 Robertson	15 American		
Butax 200 2x2 5	15540	57 HCC-Cordele	10 B/H		
Butax 200 2x2 5	15540	57 HCC-Cordele	15 American		
Butax 200 2x2 5	15540	57 HCC-Cordele	20 Gray-Albany		
Butax 200 2x2 5	15540	57 HCC-Cordele	21 Gray-Ashburn	876	4,380
Butax 200 2x2 5	15540	57 HCC-Cordele	30 AWS	792	3,960
Butax 200 2x2 5	15540	57 HCC-Cordele	35 Robertson	792	3,960
Butax 200 4x1	15560	11 Casco	10 B/H		
Butax 200 4x1	15560	11 Casco	35 Robertson		
Butax 200 4x1	15560	15 Amer White	35 Robertson		
Butax 200 4x1	15560	20 Gray-Albany	30 AWS		
Butax 200 4x1	15560	20 Gray-Albany	35 Robertson		
Butax 200 4x1	15560	21 Gray-Ashburn	30 AWS		
Butax 200 4x1	15560	57 HCC-Cordele	20 Gray-Albany		
Butax 200 4x1	15560	57 HCC-Cordele	21 Gray-Ashburn		
Butax 200 4x1	15560	57 HCC-Cordele	35 Robertson		
Butax 7500 DF 10x2 33	15580	10 B/H	15 American		
Butax 7500 DF 10x2 33	15580	15 American	10 B/H		
Butax 7500 DF 10x2.33	15580	88 Odom	10 B/H		
Butax 7500 DF 10x2.33	15580	88 Odom	21 Gray-Ashburn		
Ethephon	15740	97 In Transit	78 Odom-Pachuta		
Tromethamine 25 Kg	17120	10 B/H	4 Pt		
DCPI	40150	52 Gulf States	4 Pt		43,541
DCPI	40150	87 In-Transit	52 Gulf States		
DCPI	40150	97 In-Transit	4 Pt		
Isophorone	40500	88 Odom	78 Odom-Pachuta		
Arnud Emulsiifer	40900	88 Odom	78 Odom-Pachuta		
Mt 55's	42300	88 Odom	78 Odom-Pachuta		
2,4 D-B Acid	41550	10 B/H	57 HCC-Cordele		
2,4 D-B Acid	41550	20 Gray-Albany	57 HCC-Cordele		
2,4 D-B Acid	41550	20 Gray-Albany	88 Odom		

Transfers Cont'd:	Item No	From	To	Cases/Drums	Gals/Lbs
2,4 D-B Acid	41550	21 Gray-Ashburn	57 HCC-Cordate		
2,4 D-B Acid	41550	86 Odom	10 BAH		
Ht Sil	41500	86 Odom	10 BAH		
Stepwet	41810	86 Odom	10 BAH		
Corri Clay	41620	86 Odom	10 BAH		
Ethephon	41680	4 Pit	86 Odom-Waynesboro		
Soprophor	41690	78 Pachuta	86 Odom-Waynesboro		
Nitromethane	42680	10 BAH	4 Pit		
1 Gal jug mt	44100	20 Gray-Albany	57 HCC-Cordate		
2 5 Gal jug mt	44200	57 HCC-Cordate	78 Odom-Pachuta		
2 5 Gal jug mt	44200	78 Odom-Pachuta	86 Odom-Waynesboro		
2 5 Gal jug mt	44200	86 Odom	78 Odom-Pachuta		
Arquar 2C75	45120	86 Odom	78 Odom-Pachuta		
Irgalite Blue Dye	45130	86 Odom	78 Odom-Pachuta		
55 Gal Mt	45150	86 Odom	78 Odom-Pachuta		
Butachlor	45200	86 Odom	78 Odom-Pachuta		

Raw Materials Received:	Item No	Lbs		Item No	Gals/Lbs
OCA	3020		Cordate/Gray		
Flake Tech	3050				
P Acid	40200	488,210	60 % DMA	41580	
P Arthy	40300	177,240	Citric Acid	41590	
M O	40400	582,671	2,4 D-B Acid	41550	
Isoph/Mibk	41080	489,780	Jugs-1 gal plastic	44100	10,752
Isoph	40500	220,640	Jugs-2 5 gal Plas	44200	6,680
Emul	40600	309,780			
Aromatic B	40800	44,200	Odom-Waynesboro		
Amul	40900	44,460	Nadex	41810	
Mibk	41300		Stepperse	41600	
Ethephon	41680		Glycerine	41480	
MCPA-IOE	40830		Alforac	41490	
55 Crystal Litho	42550		HtSil	41500	
55 m's Black	42300	1,038	Poly O	41470	
35 m's Plastic	42220	1,550	Morwet	41460	10,000
35 m's Plastic	42230	3,688	30 m's	42100	2,520
Cone Blend			2 5 gal jugs	44200	
Stepbac			Citric Acid	41580	
50L m's			Veegum	41570	5,000
ODCB	41000	1,489,720	Continental Clay	41620	
Sulfuric Acid	41010	1,084,060	Kelzan	41510	
Nitric Acid	41020	542,620	DC Antifoam	45140	
Soda Ash	41050	5,400	Arquar	45100	
Lime	41060	30,000	Arquar 2C75	45120	
Caustic 50%	41530		Irgalite	45130	
50% Rayon Caus	45090		Soprophor 4D38	41690	
Cleaning Solution		7,260	55 m's		
Ethephon	41680		Soprophor	41690	
Platinum	41040 (In Transit)		Butachlor	45200	
Catalyst	41070	441	Odom-Pachuta	41680	
Peroxide	41090	20,000	2,4 D-B Acid	41550	
Hydrogen	41030	51,780	2.5 m's	44200	
Methanol	42640		Transit-N O		
			Ethephon	41680	
			Gray Dist		
			2,4 D-B Acid	41550	Ashturn
			2,4 D-B Acid	41550	Albany
			DCPI	40150	
			TA		
15 gal M's			50% Caustic	45090	
Sun Od	41640	48,960	Nitromethane	42680	4,248
Morpholine	41630		Formaldehyde	41540	
55 gal Plastic			Methanol	42640	13,380
5 m's	42000	528	Raney Nickel	42690	
30 m's			Sulfuric Acid	41010	
20 L m's	42000 Plast		Sodium Bisulfide		
2.5 m's	44200		DMA	42700	
Duron					

Heptane	41660	Calcium Chloride	
Sulfuric Acid	41520	Caustic 50%	41530
Anhydrous DMA	41650	Sulfuric Acid	41520

Raw Materials Received:

Item No	Lbs	Item No	Gals/Lbs
FMC 5-Nitro		Blackhawk	
Step 3	89,500	Nitromethane	42680
Step 4		2 5 Mt jugs	44200
Step 5			
Chlorine	16,000	Platt	
A Sulfate	24,520	20 mt's	42000
G Acid	16,000		
50% Caustic	47,600	Acfluorfen	
20% Oleum	46,540	50% Caustic	41530
Methanol		Mixed Nitrating A	41700
Soda Ash		Acetic Anhydride	41710
Toluene	107,840	98 % Sulfuric Acid	41010
93% Sulfuric Acid		Ethylene Dichlor	41720
Mixed Acid		Calcium Chloride	
Spent Acid		R118118	90200
			622,517
Ethephon		Duocosa	
PCL3	48220	2-4 DB Acid	46000
Ethylene Oxide	48210	Metaulfon Meth	48010
Sulfuric Acid	41010	Acido Propionc	48020
Anhydrous Hcl	48200	Acido Propionc	48030
Nitrogen		Dicloroantima 98	48040
E Glycol		Propand Tech	48050
Acetone		Criston 34	48060
Calcium Chloride		Criston 160	48070
		Acete Banana	46080
		Oxido Mesillico	46090

Adjustments to inventory (Per physical; samples; etc.):

Product	Item No	Location	Type Adj	Cases/Drums	Gals/Lbs			
Propand Tech	3000	4 Plant	Adj-Inv		S 1054	1440	S	702 1420
Flaked Tech	3050	4 Plant	Sample		C 955	7700	S	804 1420
Flaked Tech	3050	78 Odorn-Pachuta	Adj-Inv		C 184	6835	S	804 1420
Flaked Tech 25 Kg	3060	4 Plant	Adj-Inv		C 955	7700	S	822 1420
Flaked Tech 25 Kg	3060	66 Odorn	Adj-Inv		C 3055	5100	S	822 1420
Duron	3030	66 Odorn	Adj to Physical		C 3057	5100	S	816 1420
Duron	3030	97 In Transit	Adj Inv To Quantity Shipped to Customer		C 3057	5100	S	816 1420
Duron Col 224 Kg	3070	66 Odorn	Adj to Physical		C 3058	5100	S	848 1420
Wham 2x2.5	3180	10 B/H	Adj to Physical		C 3064	5100	S	832 1420
Wham 2x2.5	3180	66 Odorn	Adj to Physical		C 3064	5100	S	832 1420
3# 20 L	3220	25 Platt	Leaker		C 3067	5100	S	819 1420
3# Propand 200L	3250	4 Plant	Label Change		C 3067	5100	S	807 1420
Wham 5	3260	4 Plant	Adj-Inv		C 3064	5100	S	808 1420
Wham 5	3260	10 B/H	Adj-Inv		C 3064	5100	S	808 1420
Wham 5	3260	66 Odorn	Prod Complaint		C 3064	5170	S	808 1420
Propanex 500	3280	4 Plant	Label Change		C 3042	5100	S	829 1420
4# Bulk	3300	4 Plant	Adj-Inv		C 3069	5100	S	817 1420
4# 35	3340	4 Plant	Donation	(1)	C 3069	5100	289 80	S 814 1420 (289 80)
4# 35	3340	15 American	Adj-Inv		C 3069	5100	S	814 1420
4# 55's	3310	4 Plant	Label Change		C 3069	5100	S	818 1420
4# 210L	3320	4 Plant	Adj-Inv		C 3069	5100	S	836 1420
Super Wham 30 g	3350	15 American	Adj-Inv		C 3064	5100	S	831 1420
Super Wham 30 g	3350	66 Odorn	Adj-Inv		C 3064	5100	S	831 1420
Prop Tech	3000	4 Plant	Melted F Tech		C 155	6810	S	702 1420
Flake Tech	3050	4 Plant	Melted F Tech		S 804	1420	C	155 6740
Flake Tech	3050	66 Odorn-Waynesboro	Adj to Physical		C 164	6835	S	804 1420
Flaked Tech 25 Kg	3060	66 Odorn-Waynesboro	Adj to Physical		C 3055	5100	S	822 1420
Wham 2x2.5	3180	10 B/H	Adj to Physical		C 3064	5100	S	832 1420
Wham 30	3240	10 B/H	Complaint		C 3064	5170	S	805 1420
Wham 5	3240	66 Odorn-Waynesboro	Adj to Physical		C 964	7700	S	806 1420

Adjustments to Inventory Cost(Per physical; samples; etc.):

Product	Item No	Location	Type Adj	Cases/Drums	Gals/Lbs			
Prop 4# 210 L	3320	4 Plant	Adj-Inv		C 3069 5100		\$	836 1420
4# 35's	3340	4 Plant	Adj-Inv		C 3069 5100		\$	814 1420
4# 35's	3340	10 B/H	Adj-Inv		C 3069 5100		\$	814 1420
Super Wham 30	3350	10 B/H	Adj to Physical		C 3064 5100		\$	831 1420
Super Wham 2x2.5	3360	86 Odom-Waynesboro	Adj-Inv		C 864 7700		\$	834 1420
Super Wham 2x2.5	3360	10 B/H	Adj-Inv		C 3064 5100		\$	834 1420
Super Wham 2x2.5	3360	86 Odom	Samples		C 864 7700		\$	834 1420
Propanil 360 210L	10020	4 Plant	Repackage		C 3067 5100		\$	826 1420
Propanil 360 200L	10030	4 Plant	Label Change		C 3067 5100		\$	825 1420
Butox 200 2x2.5	15540	21 Gray	Adj-Inv		C 430 5100		\$	430 1420
Butox 200 4x1	15560	57 HCC Cordata	Adj-Inv		C 430 5100		\$	430 1420
Butox 7500 DF 10x2 33	15580	20 Gray-Albany	Samples		C 420 7700		\$	850 1420
Butox 7500 DF 10x2 33	15580	10 B/H	Samples		C 420 7700		\$	850 1420
Ethephon	15740	21 Gray-Ashburn	Set Up Finish Goods		C 187 6740		\$	851 1420
Ethephon	15740	78 Odom-Pachuta	Set Up Finish Goods					
Tromethamine Bulk	17000	4 Plant	Adj-Inv		C 183 6740		\$	849 1420
Tromethamine 25 Kg	17120	4 Plant	Adj-Inv		C 3683 5100		\$	843 1420
Trometamol 50 Kg	17240	4 Plant	Adj-Inv		C 3683 5100		\$	847 1420
Tra Ultra Pure 100Kg	17250	4 Plant	Adj-Inv		C 3683 5100		\$	853 1420
DCPI	40150	97 In Transit	Adj to Physical		C 157 5635		\$	715 1460
Dowfax	40700	86 Odom-Waynesboro	Adj to Physical		C 164 5850		\$	753 1460
Arnul Emulsifier	40900	78 Odom-Pachuta	Adj to Physical		C 168 5675		\$	720 1460
TM-2 Emulsifier	40910	4 Plant	Adj to Physical		C 151 8400		\$	722 1460
Poly Solv	40920	4 Plant	Adj to Physical		C 151 8400		\$	723 1460
Soda Ash	41050	4 Plant	Sold		C 151 8400		\$	706 1460
Monwet	41460	86 Odom-Waynesboro	Adj to Physical		C 164 5850		\$	726 1460
Polyton O	41470	86 Odom-Waynesboro	Adj to Physical		C 164 5850		\$	727 1460
Glycerine	41480	86 Odom-Waynesboro	Adj to Physical		C 164 5850		\$	728 1460
Atlonc	41490	86 Odom-Waynesboro	Adj to Physical		C 164 5850		\$	729 1460
Ketzan	41510	86 Odom-Waynesboro	Adj to Physical		C 164 5850		\$	761 1460
50% Caustic	41530	4 Plant	Adj Inv		C 151 8400		\$	763 1460
Formaldehyde	41540	4 Plant	Used out of Vinnings Stock		S 8900 1230		\$	764 1460
2,4 D-B Acid	41550	86 Odom-Waynesboro	Adj to Physical		C 410 7700		\$	765 1460
Veequan	41570	86 Odom-Waynesboro	Adj to Physical		C 164 5850		\$	731 1460
60% DMA	41580	57 HCC-Cordata	Adj to Physical		C 410 5700		\$	766 1460
Citric Acid	41590	86 Odom-Waynesboro	Adj to Physical		C 164 5850		\$	767 1460
Morphotne	41630	4 Plant	Adj-Water Treatment		C 151 8400		\$	768 1460
Ethephon	41680	21 Gray-Ashburn	Set Up Finish Good				\$	791 1460
Ethephon	41680	78 Odom-Pachuta	Set Up Finish Good		C 187 5910		\$	791 1460
Ethephon	41680	86 Odom-Waynesboro	Adj-Inv		C 198 5710		\$	791 1460
Soprophor	41690	86 Odom-Waynesboro	Samples		C 164 5850		\$	809 1460
Drums 30 plastic	42100	86 Odom-Waynesboro	Adj to Physical		C 164 5870		\$	752 1460
35 mls	42210	4 Plant	Adj-Inv		C 1069 5890		\$	738 1460
55 ml black	42300	78 Odom-Pachuta	Adj to Physical		C 1058 5890		\$	742 1460
55 ml Crystal	42550	4 Plant	Adj-Inv		S 4 1230		\$	756 1460
Methanol	42640	4 Plant	Adj-Inv		C 151 8400		\$	735 1460
HCl	42670	4 Plant	Adj-Inv		C 151 8400		\$	758 1460
Sodium Hypo	42610	4 Plant	Sent to Ponds		C 151 8400		\$	789 1460
Hydroxamine Sulfate	42650	4 Plant	Adj to Physical		C 151 8400		\$	736 1460
Jugs 1	44100	57 HCC-Cordata	Adj-Inv		C 430 5870		\$	749 1460
Jugs 2 5	44200	86 Odom-Waynesboro	Adj to Physical		C 164 5870		\$	759 1460
Jugs 2 5	44200	78 Odom-Pachuta	Adj to Physical		C 164 5870		\$	759 1460
Antifoam AF 1500	45000	4 Plant	Transfer to Vinnng Stock		S 8900 1230		\$	770 1460
DMPA	45020	4 Plant	Transfer to Vinning Stock		S 8900 1230		\$	772 1460
GMS	45030	4 Plant	Used out of Vinnings Stock		S 8900 1230		\$	773 1460
Metaoure T-1	45040	4 Plant	Transfer to Cedar Stock		S 8900 1230		\$	774 1460
20% Rayon Caustic	45080	4 Plant	Transfer to Cedar Stock		S 8900 1230		\$	779 1460
50% Rayon Caustic	45090	4 Plant	Used In Ponds		C 2251 8400		\$	782 1460
50% Rayon Caustic	45090	4 Plant	Adj to Physical		C 151 8400		\$	782 1460
Arquad	45100	86 Odom-Waynesboro	Adj to Physical		C 158 5850		\$	781 1460
Arquar	45120	86 Odom-Waynesboro	Adj to Physical		C 158 5850		\$	783 1460
Ingalite Blue	45130	86 Odom-Waynesboro	Adj to Physical		C 158 5850		\$	784 1460
DC 1500 Antifoam	45140	86 Odom-Waynesboro	Samples		C 164 5850		\$	785 1460
55 ml	45150	86 Odom-Waynesboro	Adj to Physical		C 1058 5890		\$	786 1460
Cans 5 gal mls	42000	4 Plant	Adj to Physical		C 151 8400		\$	739 1460

Misc Activity:				Lbs/Gls					
DCA Shipped for conversion to DCPI									
DCA	3020	4 Plant							
DCPI Conversion									
DCPI	40150	97 In-Transit	Purchased		S	2	1440	S	715 1460
DCA	3020	97 In-Transit	Used		S	2	1440	S	701 1420
Platinum Purchased.									
Platinum	41040	97 In-Transit							
F/G Purchased:									
Butox 200 Bulk	15200	97 In-Transit	Purchased						
Duron	3030	97 In-Transit	Purchased						
DCA	3020	97 In-Transit	Purchased	City	S	430	1420	C	430 6740
DCA	3020	97 In-Transit	Used	93,265	S	816	1420	241,530 45	C 157 6740 (241,530 45)
DCA	3020	97 In-Transit	Used		C	157	5910	S	701 1420
DCA	3020	97 In-Transit	Sold						
DCA Returned to Westrade									
DCA	3020	4 Plant	Purchased		S	710	1420	C	153 6740
DCA	3020	97 In Transit	Purchased from Bayer		S	710	1420	C	153 6740
Flake Tech	3050	4 Plant	Purchased		S	804	1420	C	155 6740
F/G Purchased.									
Ethephon	15740	97 In-Transit	Purchased		S	851	1420	C	187 6740
F/G Purchased:									
Tms Urr Pure 100 Kg	17250	4 Plant	Purchased		S	853	1420	C	181 6740
Pure Tms Hol 100 Kg	17260	4 Plant	Purchased		S	855	1420	C	181 6740
OCCB Purchased	41000	97 In Transit		184,940					
OCCB Used	41000	97 In Transit			S	2	1440	S	703 1460
Cone Solvents									
Isophorone Purchased	40500	32 Cone Solvents	Purchased	175,940					

CFDAR - WEST HELENA
Production & Sales Units
5/31/88

CC C McGee
E White
B. Christian

P Fields
Fito Copy

Item No	PRODUCE		Prod No	SOLD		Prod No	Year-To-Date Contracts						
	Drums	lbs/gls		Drums	lbs/gls								
Acifuorfen 100% AI	5120	218,340	86	218,340	563	681,904							
BFG	5250		74		576								
FMC 5-Nitro	5280	30,813	70	30,813	580	95,113							
TA	17000	23,720	87										
TA 25 Kg	17020												
Pure Tromethamine 25Kg	17120	(67) (3,693)		40 2,205									(8,157 76)
Pure Tromethamine 50Kg	17230												
Tromethamine Total				2,205	588								
Trometamol 25 Kg	17220												
Trometamol 50 Kg	17240												
Tns Ultra Pure 100 Kg	17250												
Pure Tns Hcl 100 Kg	17260												
Trometamol Total			65		581								
P Tech-Domestic	3000	1,882,839	20	155,660	554	168,556 20							
P Tech-Export					561								
P Tech Total				155,660									(168,556 20)
DCA-Domestic	3020	1,208,684	10		553								
DCA-Export					552								
DCA Total													
Duron	3030	127,800	11	136,457	557								
Duron Col 248 Kg	3040												
Duron Col 224 Kg	3070												
Total Duron Col			12		558								
Flack Tech 25 Kg-Export	3050												
Flaked Tech-Export													
Total Flack Tech-Export					562								
Flack Tech 25 Kg-Domestic	3060	200 11,020		200 11,020		(702,024.40)							(14,105 60)
Flaked Tech-Domestic	3050	145,500	21	(657,000)									716,130 00
Total Flack Tech-Domestic				(645,980)	555								
Flacke Tech Total				(645,980)									
Propanol 360 200L	10030					285,016 53							
Propanol 360 35 gl	10010												
Propanol 360 210L	10020												
Supernox 360 200L	10040												
3# bulk	3200	29,789	23										
3# 50 L	3180												
3# 20L	3220	180 1,004		961 5,078									
3# 200L	3250	580 30,647		629 33,236									(35,851 70)
3# 55	3210	61 3,355		61 3,355									(235,313 43)
3# Total				41,669	567								(23,753 40)
Wham 2.12 5-Domestic	3180	1 5											
Wham 5-Domestic	3260												
Wham 100L	3230												
Wham 30-Domestic	3240	723 21,690		503 15,090									(117,551 10)
Super Wham Bulk	3370	4,544		4,544									(31,171 84)
Super Wham 2x2.5-Domest	3360	1 5		(185) (980)									7,634 20
Super Wham 30-Domestic	3350	2,240 67,200		3,008 90,240									(702,869 60)
Wham Dom Sub-Total		93,444	25	108,694	564								
Bandit 200L	3140												
Bandit Total			27		568								
Stam bulk	3400	133,808	32	84,368									
Stam 35	3420	1,431 50,085		1,430 50,050									(752,112 96)
Stam Total				144,418	572								(434,834 50)

	Item No	PRODUCE		Prod No	SOLD		Prod No			
		Drums	lbs/gls		Drums	lbs/gls				
4# bulk	3300		209,548	24		28,912				
Propanex 500 55	3280									
4# 20 L	3280	180	1,003		180	1,003				
4# 55	3310	413	22,715		414	22,770				
4# 210 L	3320									
4# 200 L	3330	118	6,235		215	11,381				
4# 35	3340	4,089	143,115		4,117	144,085				
Propanex 35	4310									
Supernox 480 200L	10050									
Prop 4# Domestic Sales						208,141	569			
Butoxone 175 4r1	15260				1,044	4,176				
Butoxone 175 2x2 5	15240	383	1,915		612	3,060				
175 Total			1,915	51		7,236	591			
Butoxone 200 2x2 5	15540	1,785	8,925		828	4,140				
Butoxone 200 4r1	15560				216	864				
200 Total			8,925	52		5,004	594			
Ethephon 100% AI	15740			90			595			
Butox 7500 10x2.33	15580			53	98	960	592			
KVH						1,287,782	101			
Total										
								4,025,098 48		(4,025,098 46)

C 3069	5100	1,702,878 30	S 817 1420	(218,863.84)
			S 829 1420	
			S 812 1420	(8,308 50)
			S 818 1420	(188,535 60)
			S 836 1420	
			S 839 1420	(94,065 77)
			S 814 1420	(1,183,106 60)
			S 814 1420	
			S 835 1420	
C 410	5100	88,423 82	S 410 1420	(88,423 82)
C 430	5100	68,454.72	S 430 1420	(68,454.72)
C 3887	5100		S 851 1420	
C 420	5100	13,104 00	S 850 1420	(13,104.00)

Mesh Goods Standard Product	Item No	Unit	Per Unit	
ropand Tech Bulk	3000	lbs	1.07	
CA-Cedar	3020	lbs	1.06	
uron	3030	lbs	2.59	
uron Col 249 Kg	3040	lbs	1.66	
laked Tech	3050	lbs	1.09	
laked Tech 25Kg	3060	lbs	1.28	
uron Col 224 Kg	3070	lbs	1.66	
5% Blend	3100	lbs	1.01	
andit 200L	3140	gls	13.75	
ham CF (80%) 40#	3150	lbs		1.70
haml EZ 2x2 5 Gal	3180	gls	7.79	
l 50 Liter	3190	gls	7.08	
ropandl 3# bulk	3200	gls	6.43	
ropandl 3# 55 gal	3210	gls	7.08	
ropandl 3# 20L	3220	gls	7.08	
ham 100 Liter	3230	gls	7.79	
ham 30 gal	3240	gls	7.79	
ropandl 3# 200L	3250	gls	7.08	
ham 5 gal	3260	gls	7.79	
ham 80% 50#	3270	lbs		1.70
ropandex 600 55 Gal	3280	gls	8.28	
ropandl 4# 20L	3290	gls	8.28	
ropandl 4# Bulk	3300	gls	7.57	
ropandl 4# 55 gal	3310	gls	8.28	
ropandl 4# 210 L	3320	gls	8.28	
ropandl 4# 200L	3330	gls	8.28	
ropandl 4# 35 gal	3340	gls	8.28	
uper Whaml 30 gal	3350	gls	7.79	
uper Whaml 2x2 5 Gal	3360	gls	7.79	
uper Whaml Bulk	3370	gls	6.66	
lam Bulk	3400	gls	7.97	
lam 35 gal	3420	gls	8.69	
tampede	3430	gls	11.65	
ropandex 35 gal	4310	gls	8.28	
nsammo Alcohol	5340	lbs	3.70	
ropandl 360 35 gal	10010	gls	7.08	
ropandl 360 210 L	10020	gls	7.08	
ropandl 360 200 L	10030	gls	7.08	
upermax 360 200 L	10040	gls	7.08	
upermax 480 200 L	10050	gls	8.28	
utax 200 Bulk	15200	gls	10.25	
utax 175	15240/15260	gls	12.22	
utax 200	5530/15540/1556	gls	13.68	
utaxone 7500 DF	15580	Bag	13.65	
tuck 2x2 5	15700	gls	22.87	
tuck 4x1	15710	gls	22.87	
tuck Bulk	15720	gls	23.11	
tuck 30	15730	gls	22.87	
Ihephon	15740	lbs	1.24	
romethamine Bulk	17000	lbs	3.70	
ham 25 Kg	17020	lbs	3.70	
Product	Item No	Unit	Per Unit	
ure Tromethamine 25 Kg	17120	lbs	3.70	
romethamol 25 Kg	17220	lbs	8.39	
ure Tromethamine 50 Kg	17230	lbs	3.70	
romethamol 50 Kg	17240	lbs	8.39	
ns Ultra Pure 100 Kg	17250	lbs	8.22	
ure Tris-Hcl 100 Kg	17260	lbs	8.22	

Mfr Standard	Item No	Unit	Per Unit
product			
CA	40100	lbs	1.05
CPI	40150	lbs	2.36
Acid	40200	lbs	.30
Anhydr	40300	lbs	.82
IO	40400	lbs	.58
sophor	40500	lbs	.72
mul	40600	lbs	.70
owfax 382	40700	lbs	7.52
em 500	40800	lbs	.17
mul	40900	lbs	.67
M-2 Emulsifier	40910	lbs	1.65
oxySol	40920	lbs	.71
ICPA-IOE	40930	lbs	1.78
DCB	41000	lbs	.37
sulfuric Acid	41010	lbs	.04
trnc Acid	41020	lbs	.16
ydrogen	41030	lbs	1.13
lstrum	41040	tr oze	393.00
oda Ash	41050	lbs	.13
me	41060	lbs	.07
tal Cat	41070	lbs	66.00
soph/Mibk	41080	lbs	.64
ydrogen Peroxide	41090	lbs	.34
ylene (Cedar)	41200	lbs	.19
ibk	41300	lbs	.47
angel	41450	lbs	1.37
lorawet	41460	lbs	1.08
oxyfon	41470	lbs	.62
lycer	41480	lbs	.60
tonic	41490	lbs	.78
l Sl	41500	lbs	.83
etzan	41510	lbs	5.30
sulfuric Acid 93%	41520	lbs	.04
caustic 50%	41530	lbs	.08
ormaldehyde	41540	lbs	.11
.4 D-B Acid	41550	lbs	4.68
arbon Bisulfide	41560	lbs	.28
ee gum	41570	lbs	1.85
0% DMA	41580	lbs	.60
zinc Acid	41590	lbs	.82
tep-sperse DF 200	41600	lbs	1.27
repwet DF 95	41610	lbs	2.48
ontmental Clay	41620	lbs	.08
orphosne	41630	lbs	1.06
um 7N Oil	41640	lbs	.16
nhydrous DMA	41650	lbs	.64
igh Curly Heptane	41660	lbs	.21
technical Carbonyl	41670	lbs	3.75
3hephon	41680	lbs	3.37
orprophor 4d384	41690	lbs	1.87
Acid Nitrating Acid	41700	lbs	.11
oetic Anhydride	41710	lbs	.42
ethylene Dichloride	41720	lbs	.22
gal/20 L Pts	42000	ea	3.95
0 Mts	42100	ea	15.85
lam 35	42200	ea	17.90
5 mt's	42210	ea	19.50
5 mt's Plastic/Stam	42220	ea	17.78
5 mt's Plastic/Prop	42230	ea	18.50
5 mt's	42300	ea	22.05
5 mt's Plastic	42300	ea	22.50
5 mt's Crystal Litho	42550	ea	21.60
ATPO Drums	42600	ea	25.55
Sodium Hypo	42610	lbs	.08

Product	Item No	Unit	Per Unit
caustic 30%	42620	lbs	07
lethal Mercapten	42630	lbs	78
lethanol 99%	42640	lbs	.13
hydroxamine Sulfate	42650	lbs	1.00
caustic 17%	42660	lbs	03
hydrochloric Acid	42670	lbs	05
tromethane 99.5%	42680	lbs	1.38
nickel Catalyst	42690	lbs	7.83
MA 40% Solution	42700	lbs	.47
napaols	44000	ea	2.88
ugs-1 Gal Plastic	44100	ea	.43
ugs-2 5 Gal Plastic	44200	ea	1.36
ntifoam AF 9000	45000	lbs	9.60
cetone	45010	lbs	35
emethylolpropionic	45020	lbs	2.83
tyoerol Monosterate	45030	lbs	71
letacure T-1 Catalyst	45040	lbs	12.26
lethylmethanotamine	45050	lbs	2.15
roxel GXL Biocide	45060	lbs	5.20
oulene Diisocyanate	45070	lbs	1.33
0% Rayon Grade Caustic	45080	lbs	11
0% Rayon Grade Caustic	45090	lbs	06
rquad 16/28	45100	lbs	1.15
rquar 2C75	45120	lbs	1.85
galite Blue dye	45130	lbs	13.55
IC 1500 Antifoam	45140	lbs	5.97
trum 55 gal Diuron Col	45150	ea	44.95
utachlor	45200	lbs	2.35
odium Cyanide	45300	lbs	80
EAB	45310	lbs	3.90
enneco 500/100	45320	lbs	18
6% Hcl	45330	lbs	10
oluene	45340	lbs	15
lock Salt	45350	lbs	19
honyl Chloride	45360	lbs	0.70
MF	45370	lbs	0.85
ranular Salt	45380	lbs	0.12
5 ml Drums (Cyper)	45390	lbs	29.50
-4 DB Acid 95%	46000	Kg	2.55
letsulfuron Methyl 90%	46010	Kg	116.50
acido Propionico Puro	46020	Kg	1.27
acido Propionico Usado	46030	Kg	1.27
icloroanilina 98%	46040	Kg	3.00
ropand Tech	46050	Kg	3.08
riston 34	46060	Kg	2.26
riston 180	46070	Kg	2.48
ccete Banana	46080	Kg	0.11
odo Metilico	46090	Kg	2.08
olueno	46100	Kg	0.79
unhydrous Hydr Chloride	46200	lbs	0.70
Ethylene Oxide	46210	lbs	0.42
hosphorus Trichloride	46220	lbs	0.42

CENSUS USE ONLY

DEPARTMENT OF THE TREASURY
UNITED STATES CUSTOMS SERVICE

**APPLICATION FOR
FOREIGN-TRADE ZONE ADMISSION
AND/OR STATUS DESIGNATION**

19 CFR 146.22, 146.32, 146.35-146.37, 146.39-146.41, 146.44, 146.53, 146.66

1. ZONE NO. AND LOCATION (Address) CEDAR CHEMICAL CORPORATION FTZ 14B HIGHWAY 242 SOUTH WEST HELENA, ARKANSAS 72390
2. DISTRICT/PORT CODE 20 - 06 MEMPHIS, TENNESSEE

3. IMPORTING VESSEL (& FLAG)/OTHER CARRIER (AM) S/S SEA-LAND PERFORMANCE	4. EXPORT DATE 5/24/97	5. IMPORT DATE 6/9/97	6. ZONE ADMISSION NO 19910220 10
7. U.S. PORT OF UNLADING HOUSTON, TEXAS	8. FOREIGN PORT OF LADING LE HAVRE	9. BILL OF LADING/AWB NO POCLLHB721278875	10. INWARD M'FEST NO N/A
11. INBOND CARRIER TRIPLE E TRANSPORT	12. IT NO AND DATE #313,963,576 6/19/97	13. I.T. FROM (Port) NEW ORLEANS, LA.	
14. STATISTICAL INFORMATION FURNISHED DIRECTLY TO BUREAU OF CENSUS BY APPLICANT? <input type="checkbox"/> YES <input type="checkbox"/> NO			

15 NO OF PACKAGES AND COUNTRY OF ORIGIN	16 DESCRIPTION OF MERCHANDISE	17 HTSUS NO	18 QUANTITY (HTSUS)	19 GROSS WEIGHT	20 SEPARATE VALUE & AGGR CHGS
2 C/O FR	(20') TANK CONTAINERS: 3-4-DICHLOROPHENYLISOCYANATE (3,4-DCPI) TOXIC LIQUID HAZARDOUS CARGO CLASS 6.1 UN 2250 P.G. II SECURITY SHEET: 6.1 - 04 M.F.A.G. TABLE: 370 EMERGENCY TELEPHONE: (800) 424-9390	2929.10.3000 FTZ 14B IMPACT DELIVERY PROGRAM SIGNATURE	39000 Kg	46620 Kg	\$204,750. CIF \$3,581. NDC \$201,169. FOB
21 HARBOR MAINTENANCE FEE (19 CFR 24.24) <input type="checkbox"/>					\$251.46

22 I hereby apply for admission of the above merchandise into the Foreign-Trade Zone. I declare to the best of my knowledge and belief that the above merchandise is not prohibited entry into the Foreign-Trade Zone within the meaning of section 3 of the Foreign-Trade Zones Act of 1934, as amended, and section 146.31, Customs Regulations

23 I hereby apply for the status designation indicated.

<input checked="" type="checkbox"/> NONPRIVILEGED FOREIGN (19 CFR 146.42)	<input type="checkbox"/> PRIVILEGED FOREIGN (19 CFR 146.41)	<input type="checkbox"/> ZONE RESTRICTED (19 CFR 146.44)	<input type="checkbox"/> DOMESTIC (19 CFR 146.43)
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24 APPLICANT FIRM NAME CEDAR CHEMICAL CORPORATION	25. BY (Signature)	26 TITLE	27 DATE
F.T.Z. AGREES TO RECEIVE MERCHANDISE INTO THE ZONE	28 FOR THE FTZ OPERATOR (Signature)	29 TITLE	30 DATE
PERMIT Permission is hereby granted to transfer the above merchandise into the Zone.	31 DISTRICT DIRECTOR OF CUSTOMS. BY (Signature)	32 TITLE	33 DATE
PERMIT The above merchandise has been granted the requested status.	34 DISTRICT DIRECTOR OF CUSTOMS BY (Signature)	35 TITLE	36 DATE

PERMIT TO TRANSFER	37 The goods described herein are authorized to be transferred <input type="checkbox"/> without exception <input checked="" type="checkbox"/> except as noted below			
	38 CUSTOMS OFFICER AT STATION (Signature)	39 TITLE	40 STATION	41 DATE
	42 RECEIVED FOR TRANSFER TO ZONE (Driver's Signature)	43 CARTMAN	44 CHL NO	45 DATE
FTZ OPERATOR'S REPORT OF MERCHANDISE RECEIVED AT ZONE	46. To the District Director of Customs The above merchandise was received at the Zone on the date shown except as noted below DISCREPANCY OF +/- .005 LT0245/005.4 - ACTUAL DELIVERED WEIGHT OF 43,600 LBS. UT0045/006.0 - ACTUAL DELIVERED WEIGHT OF 43,900 LBS.			
	47 FOR THE FTZ OPERATOR (Signature)	48 TITLE	49 DATE	

RAW MATERIAL RECEIVING RECORD No 9973

CEDAR CHEMICAL 9000-1 REV: C

TIME IN AT GATE
10:50

RECEIVED BY
T. Nicholas

SECTION 1

DATE 6-20-97	ORDER NO. <i>n/a</i>	CAR OR TRUCK NO. UTC0457006-0	DECLARED WEIGHT Net <i>n/a</i> 43230
------------------------	-------------------------	---	--

SHIPPER <i>Hillcat</i>	CARRIER <i>Triple E</i>
---------------------------	----------------------------

QUANTITY	CONTAINER	DESTINATION	RAW MAT CODE #	DESCRIPTION
1	S/C	unit #5	40150	DCPI

COMMENTS
Lab Hat C.O.A.

SECTION 2

RECIPIENT <i>T. Nichols</i>	TIME SAMPLE/CERTIFICATE TAKEN TO LAB
--------------------------------	--------------------------------------

UNLOADED AT (tank number, unit, warehouse, etc.)
PAD

COMMENTS

SECTION 3

LAB TECHNICIAN	ACCEPT	REJECT	REASON FOR REJECTION
<i>JH</i>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	

COMMENTS

SECTION 4

SHIFT SUPERVISOR	ACCEPT	REJECT	REASON FOR REJECTION
<i>DAM</i>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	

PLANT WEIGHT NET 42920	UNLOADING TIMES		
	START TIME 20:30 6/25/97	END TIME 23:08 6/25/97	

COMMENTS
See CONTAINER WAS OPEN & IT WAS EMPTY



WEIGHED ON A FAIRBANKS SCALE ^{UTC 4} 457006-0

DATE 6/20/97

CUSTOMERS NAME Cedar
 ADDRESS w H slens arch
 COMMODITY shell Dept
 CARRIER TRIPLE E

REMARKS

76640 10:51AM JUN 20 97
17180

59460 full cart only
16540
42920

LBS. GROSS _____
 LBS. TARE - DRIVER ON _____ OFF
 LBS. NET @ _____ PER LB. PRICE _____

SHIPPER _____
 WEIGHER _____

FAIRBANKS SCALE CAT. 083905

WEIGHER _____

FAIRBANKS SCALE CAT. 083905

SHIPPER _____

LBS. NET @ _____ PER LB. PRICE _____

33580 09:59AM JUN 01 97

LBS. TARE - DRIVER ON _____ OFF

LBS. GROSS _____

REMARKS

CUSTOMERS NAME Gulf State Marine
 ADDRESS ARABI, LA
 COMMODITY DEPT residue
 CARRIER TRIPLE E

DATE 7-1-97

AMS

Form Approved
CMA No. 1515-0091

403

REV. 978949
10/01/97, 10/01/98, 10/22/91, 12/2/92

I.T. Entry No. **V19-22010763**

Port **HOUSTON, TEXAS**

Date **6/19/97**

**TRANSPORTATION ENTRY AND MANIFEST OF
GOODS SUBJECT TO CUSTOMS INSPECTION
AND PERMIT**

Entry No. **319,963,576**

Class of Entry **I.T. (53)**
(I.T. (W&T), (W&E), (T/E), (T/W&E), etc.)

UNITED STATES CUSTOMS SERVICE

Dist. No. **20** Port Code No. **02** First US Port of Unloading **HOUSTON, TEXAS**

Port of **NEW ORLEANS, LA.** Date **6/19/97**

Entered or imported by **CEDAR CHEMICAL CORPORATION** to be shipped
in bond via **TRIPLE S TRANSPORT** BOND No. **209100312** consigned to
(CUL Number) (Vessel or carrier) (Car number and initial) (Port or station)

District Director of Customs At **2006 MEMPHIS, TN** Final foreign destination **MEMPHIS, TN** (For exportation only)

Consignee **CEDAR CHEMICAL CORP. FTZ 148 HIGHWAY 242 SOUTH WEST HELONA, ARKANSAS 72390**
(All customs part of bill of lading)

Foreign port of lading **LE HAVRE** B/L No. **NO. 10721278975** Date of sailing **5/24/97**
(Name of vessel to be furnished only when necessary for purposes of vessel)

Imported on the **S/S SEA-LAND PERFORMANCE** Flag **US** on **6/9/97** via **DIRECT**
(Name of vessel or carrier and trade power) (Date imported) (Last foreign port)

Exported from **FRANCE** on **5/24/97** Goods now at **AVOCDALE CONTAINER YARD WEST**
(Country) (Date) (Name of warehouse, bonded port, etc.)

Marks and Numbers of Packages	DESCRIPTION AND QUANTITY OF MERCHANDISE NUMBER AND KIND OF PACKAGES (Describe fully as per shipping papers)	GROSS WEIGHT IN POUNDS	VALUE (Dollars only)	RATE	DUTY
UTCU-457005-4 UTCU-457006-0 A D 32	2 (20') TANK CONTAINERS: 3,4-DICHLOROPHENYLISOCYANATE (3,4-DCPI) TOXIC LIQUID HAZARDOUS CARGO CLASS 6.1 UN 2250 P.G. II SECURITY SHEET: 6.1 - 04 N.P.A.G. TABLE: 370 EMERGENCY TELEPHONE: (800) 424-9390 ITSUS 2929.10.3000 C/O FR IFB: FRH0AGRI420LYO	102778	264750	EST. NOT VERIFIED	
	FTZ 148 DIRECT DELIVERY PROGRAM 6/23/97 <i>Bob Chintz</i> Port and Signature In-Bond Entry Receipt JUN 24 1997				

G.O. No. **30023**

**CERTIFICATE OF LADING FOR TRANSPORTATION IN BOND
AND/OR LADING FOR EXPORTATION FOR**

2006 MEMPHIS, TENNESSEE

WITH THE EXCEPTIONS NOTED ABOVE, THE WITHIN-DESCRIBED GOODS WERE:
Delivered to the Carrier named above, for delivery to the District Director of Customs at destination sealed with Customs seals

Laden on the _____
(Vessel, vehicle, or aircraft)

which cleared for _____

on _____
(Date)

as verified by export records.
(Inspector)

Received from the District Director of Customs of above district the merchandise described in this manifest for transportation and delivery into the custody of the Customs officers at the port named above, all packages in apparent good order except as noted hereon.

TRIPLE S TRANSPORT
[Signature]
Attorney or Agent of Carrier

Entered or withdrawn by **CEDAR CHEMICAL CORPORATION**
by **PHILIP J. GARLAND, JR., ST. JOHN, MO. - ATTY-IN-FA**
[Signature]

To the Inspector or Warehouse Officer: The above-described goods shall be disposed of as specified herein.

For the District Director of Customs
[Signature]
Inspector

BILL OF LADING FOR COMBINED TRANSPORT SHIPMENT OR PORT TO PORT SHIPMENT

Shipper

BL No:

POCLLHB 7 2 1 27 875

STOLT-NIELSEN S.A. P/C
RHONE POULENC SECTEUR AGRO
14/20 RUE PIERRE BAIZET
B.P. NO 9163



69-263 LYON FRANCE

TO THE ORDER OF :
CEDAR CHEMICAL CORPORATION
HWY 242 SOUTH - PO BOX 2749
WEST HELENA AR. 72390
ATTN: BOB CHRISTIAN

Incorporated in The Netherlands as
P&O Nedlloyd B.V.
Hoogweg 10 3011 XD Rotterdam

Specific Party Address: "It is agreed that no responsibility shall attach to the carrier
GILSCOT GUIDROZ INTERNATIONAL
2815 DIVISION STREET - SUITE 202 -
METAIRIE LA 70002 - U.S.A. -
ATTN: KEICH GUIDROZ TEL: 504867
8897 - FAX: 504887 8898

Place of Receipt: (Applicable only when this document is used as a Combined Transport Bill of Lading)

Ocean Vessel: SEALAND PERFORMANCE
Port of Discharge: LE HAVRE
Port of Origin: NEW ORLEANS

Place of Delivery: (Applicable only when this document is used as a Combined Transport Bill of Lading)

Table with 4 columns: Marks and Nos. of Containers, Number and kind of Packages, description of Goods, Gross Weight (kg), Measurements (cubm). Includes container numbers UTCU457005/4 and UTCU457006/0, and cargo description: 2X20' SHIPPER'S OWNED TANKCONTAINERS SAID TO CONTAIN BULK OF 3,4-DICHLOROPHENYLISOCYANATE (3,4 D.C.P.I.)-TOXIC LIQUID-HAZARDOUS CARGO.

FCL/SCM BOARD stamp with handwritten signatures and dates.

IN CASE OF EMERGENCY CALL
RHONE POULENC / CHEMTREC NO:
PHONE NUMBER: 1800 424 9390

FREIGHT AND THC PREPAID
IN LE HAVRE BY
STOLT-NIELSEN S.A.

2 NO NOTIFY :
STOLT TANKCONTAINERS INC.
15602 JACINTOPORT BLVD.
HOUSTON, TX 77015 - U.S.A.-
ATTN: KEVIN FALLON
TEL: 1 (281) 457-1080

ABOVE PARTICULARS AS DECLARED BY SHIPPER

RECEIVED by the Carrier from the Shipper in apparent good order and condition (unless otherwise noted hereon) the total number or quantity of Containers or other packages or units indicated in the box opposite entitled "Total No. of Containers/Packages presented by the Carrier" for transport subject to all the terms based UNCLT/CMR THE TERMS ON THE REVERSE HEREOF AND THE TERMS OF THE CARRIER'S APPLICABLE TARIFF from the Place of Receipt to the Place of Delivery, whichever is applicable, to the Port of Discharge or the Place of Delivery, whichever is applicable. The original Bill of Lading must be surrendered duly endorsed, on exchange for the Goods, in accepting this Bill of Lading the Merchant expressly accepts and agrees to all the terms and conditions whether printed, stamped or written, or otherwise appearing on the Bill of Lading by the Merchant.

Freight payable at LE HAVRE 21 JUN 1997. Place and Date of Issue: LE HAVRE 21 JUN 1997. IN WITNESS of the contract herein contained, the number of originals stated opposite have been signed, one of which being accomplished the original to be used. For P&O Nedlloyd B.V. As Carrier.

ORIGINAL

RHONE-POULENC AGRO

14-20, RUE PIERRE BAIZET B P 9163
 69263 LYON CEDEX 09 - FRANCE
 TEL 04 72 85 25 25 FAX 04 72 85 27 98
 TLX 310 088 F RHONE
 N IDENTIFICATION TVA FR 53 969 503 309

INVOICE NO: 20115118 DATED: 20.05.1997
 Date: 20.05.1997

UNDESIGNER: ...
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INVOICEE: ...
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LOC: NEW ORLEANS

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SH N°: 20241790

...
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 ...
 ...

... 204.750.00 USD

204.750.00 USD

... GENERAL DES IMPOTS

... SOCIETE GENERALE ...
 ...
 ...

RHÔNE POULENC
 SI ... GRO
 14/20 ... B.P. 9163
 LYON CEDEX 09
 TEL 04 72 85 25 25 FAX 04 72 85 27 98
 SA Capital 1 431 515 000 - RC LYON 8 969 503 309

TOLOCHIMIE

ADRESSER VOTRE CORRESPONDANCE A
TOLOCHIMIE - Imprimerie PAI AYRÉ
B P 1196 - 31037 TOULOUSE CEDEX 1
TÉL 05 61 31 78 78
TÉLÉCOPIE 05 61 31 78 50

N / REF : MF / ML

DATE 16-Mai-97

CEDAR

COMMANDE N° 201 27462
EXPEDITION N° 438
DU 16 Mai 97

CAMION CITERNE N°
CONTAINER N° UTCU 457006.0
WAGON N°

N° DE LOT DU PRODUIT B303A/16.5.97.5
N° DE LOT DU CONDITIONNEMENT
(s' il y a lieu)

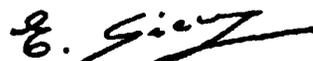
CERTIFICAT D'ANALYSE DU 3,4-DICHLOROPHENYLISOCYANATE

Nous certifions que le produit ci-dessus a la composition suivante :

M E T H O D E	Détermination	Valeur	Unité	Spécification	Méthode d'analyse Tolochimie
1	aspect	conforme		solide blanc	Visuelle
2	3,4-dichlorophénylisocyanate	99.6	%	> 98.5	To 10.27.88
2	2,3-dichlorophénylisocyanate	0.23	%	pour information	To 10.27.88
	3-chloro + 4-chlorophénylisocyanate	0	%	pour information	To 10.27.88
2	monochlorobenzène	0.01	%	< 0.2	To 10.27.88
2	semi-lourds	0.15	%	< 0.8	To 10.27.88
autre	0	0	%		To 10.27.88
autre			%		

principe de la méthode:

1	visuelle
2	C.P.G
autre	
autre	



LE RESPONSABLE DU CONTROLE ANALYTIQUE



RHONE-POULENC AGRO

14-20, RUE PIERRE BAIZET B P 9163
69263 LYON CEDEX 09 - FRANCE
TEL 04 72 85 25 25 - FAX 04 72 85 27 89
TLX 310 098 F RHONE

N° IDENTIFICATION TVA : FR 53 899 503 309 INVOICE THIS 20115499 DATED 23.05.1997
1147 : 065 01791

CONSIGNEE : (PTI (AM))
CEDAR CHEMICAL CORPORATION
ATTN : BOB CHRISTIAN
HWY 242 SOUTH
AK 72390 WEST HELENA
UNITED STATES

INVOICEE : USCEPAR
CEDAR CHEMICAL CORPORATION
ATTN : BOB CHRISTIAN
P.O. BOX 874 2743
AK 72390 WEST HELENA
UNITED STATES

U/REF : 01 1012216270010
Y/REF : 01052377
SHIPPING BY :
TERMS OF DELIVERY : CIF (BASE JHS 18.10)
TERMS OF PAYMENT : 90 DAYS INVOICE DATE
PAYMENT DATE : 21.08.1997
PAYMENT MODE : TELEGRAPHIC TRANSFER
CURRENCY : USD

LUU : NEW ORLEANS

PRODUCT CODE : 1457-2011
CUST. MATERIAL NO : 3.4 DCFE C11000
QUANTITY : 132200.00 LB
UNIT PRICE : 5.25 USD PER 1 LB
AMOUNT : 694.050.00 USD

SIN N° : 23291070

MARKING : RHONE-POULENC AGRO
3.4 DCFE
C11000 / 100A
H.W.....
G.W.....
N.W.....

TOTAL TO BE PAID

694.050.00 USD

EXONERATION TVA (PTI) 26.10.1997 ET 19.10.1998 GENERAL DES IMPOTS

TELEGRAPHIC TRANSFER OR SWIFT TO SWIFT GENERAL LYON GRANDES
ENTREPRISES : ALLOCUM NUMER 2303000000
TRF SWIFT : SWIFT SOCI. FRÉPÉRIE LYON ENTREPRISES 02280

[Signature]
RHONE-POULENC
14-20
RUE PIERRE BAIZET B P 9163
69263 LYON CEDEX 09
Tel 04 72 85 25 25 - Fax 04 72 85 27 89
SA Capital 1 431 615 000 F - RC LYON 899 503 309

CENSUS USE ONLY

DEPARTMENT OF THE TREASURY
UNITED STATES CUSTOMS SERVICE

**APPLICATION FOR
FOREIGN-TRADE ZONE ADMISSION
AND/OR STATUS DESIGNATION**

19 CFR 146.22, 146.32, 146.35-146.37, 146.39-146.41, 146.44, 146.53, 146.68

1. ZONE NO. AND LOCATION (Address)
**FOREIGN TRADE ZONE No. 2
NAPOLEON AVENUE WHARF
NEW ORLEANS, LA.**

2. DISTRICT/PORT CODE
20 - 02 NEW ORLEANS, LA.

3. IMPORTING VESSEL (& FLAG)/OTHER CARRIER
(MX) M/V NUEVO LEON V.30W

4. EXPORT DATE
5/17/97

5. IMPORT DATE
6/7/97

6. ZONE ADMISSION NO
23971

7. U.S. PORT OF UNLADING
NEW ORLEANS, LA.

8. FOREIGN PORT OF LADING
LE HAVRE

9. BILL OF LADING/AWB NO.
TEMULHNLN30W0628

10. INWARD M'FEST NO.
N/A

11. INBOND CARRIER
N/A

12. I.T. NO AND DATE
N/A

13. I.T. FROM (Port)
N/A

14. STATISTICAL INFORMATION FURNISHED DIRECTLY TO BUREAU OF CENSUS BY APPLICANT? YES NO

15 NO OF PACKAGES AND COUNTRY OF ORIGIN	16 DESCRIPTION OF MERCHANDISE	17 HTSUS NO.	18 QUANTITY (HTSUS)	19 GROSS WEIGHT	20 SEPARATE VALUE & AGGR CHGS.
7 C/O FR	(20') TANK CONTAINERS: 3,4-DICHLOROPHENYLISOCYANATE (3,4-DCPI) TOXIC LIQUID HAZARDOUS CARGO CLASS 6.1 UN 2250 P.G. II EMERGENCY TELEPHONE: (800) 424-9390	2929.10.3000	132200 KG	159760 KG	\$694,050.CI \$10,150.NC \$683,900.FC
21 HARBOR MAINTENANCE FEE (19 CFR 24.24) <input type="checkbox"/>					\$854.88

22. I hereby apply for admission of the above merchandise into the Foreign-Trade Zone. I declare to the best of my knowledge and belief that the above merchandise is not prohibited entry in the Foreign-Trade Zone within the meaning of section 3 of the Foreign-Trade Zones Act of 1934, as amended, and section 146.31, Customs Regulations.

23. I hereby apply for the status designation indicated

NONPRIVILEGED FOREIGN (19 CFR 146.42) PRIVILEGED FOREIGN (19 CFR 146.41) ZONE RESTRICTED (19 CFR 146.44) DOMESTIC (19 CFR 146.43)

24. APPLICANT FIRM NAME
CEDAR CHEMICAL CORPORATION

25. BY (Signature)
[Signature]
PHILBIN, CAZALAS & ST. JOHN INC.

26. TITLE
Atty in fact

27. DATE
6/10/97

F.T.Z. AGREES TO RECEIVE MERCHANDISE INTO THE ZONE

28. FOR THE F.T.Z. OPERATOR (Signature)
[Signature]

29. TITLE
INSP

30. DATE
6/11/97

PERMIT Permission is hereby granted to transfer the above merchandise into the Zone.

31. DISTRICT DIRECTOR OF CUSTOMS BY (Signature)
[Signature]

32. TITLE
INSP

33. DATE
6/11/97

PERMIT The above merchandise has been granted the requested status.

34. DISTRICT DIRECTOR OF CUSTOMS BY (Signature)
[Signature]

35. TITLE
INSP

36. DATE
6/11/97

37. The goods described herein are authorized to be transferred: without exception except as noted below

PERMIT TO TRANSFER

38. CUSTOMS OFFICER AT STATION (Signature)
[Signature]

39. TITLE
GULF STATES CARTAGE

40. STATION
CHL #187

41. DATE
6/10/97

42. RECEIVED FOR TRANSFER TO ZONE (Driver's Signature)
[Signature]

43. CARTMAN
GULF STATES CARTAGE

44. CHL NO.
CHL #187

45. DATE
6/10/97

FTZ OPERATOR'S REPORT OF MERCHANDISE RECEIVED AT ZONE

46. To the District Director of Customs: The above merchandise was received at the Zone on the date shown except as noted below:
CCR4 1970 79-6 FR2076 SIDE SIDE DENT

47. FOR THE FTZ OPERATOR (Signature)
[Signature]

48. TITLE
W/B/SAT

49. DATE
6-13-97

Approved through OIA/BA, OMB No. 1515-0086

CENSUS USE ONLY

DEPARTMENT OF THE TREASURY
UNITED STATES CUSTOMS SERVICE

APPLICATION FOR
FOREIGN-TRADE ZONE ADMISSION
AND/OR STATUS DESIGNATION

1. ZONE NO. AND LOCATION (Address)
CEDAR CHEMICAL CORPORATION
FTZ 14B
HIGHWAY 242 SOUTH
WEST HELENA, ARKANSAS 72390
2. DISTRICT/PORT CODE
2006-MEMPHIS, TENNESSEE

19 CFR 146.22, 146.32, 146.35-146.37, 146.39-146.41, 146.44, 146.53, 146.66

3. IMPORTING VESSEL (& FLAG)/OTHER CARRIER (MX) M/V NUEVO LEON V.30W
4. EXPORT DATE 5/17/97
5. IMPORT DATE 6/7/97
6. ZONE ADMISSION NO.

7. U.S. PORT OF UNLADING NEW ORLEANS, LA.
8. FOREIGN PORT OF LADING LE HAVRE
9. BILL OF LADING/AWB NO. TEMULHNLN30W0628
10. INWARD MFEST NO. N/A

11. INBOUND CARRIER TRIPLE E TRANSPORT
12. I.T. NO. AND DATE #313,963,635 6/30/97
13. I.T. FROM (Port) NEW ORLEANS, LA.

14. STATISTICAL INFORMATION FURNISHED DIRECTLY TO BUREAU OF CENSUS BY APPLICANT? YES NO

15. NO. OF PACKAGES AND COUNTRY OF ORIGIN	16. DESCRIPTION OF MERCHANDISE	17. HTSUS NO.	18. QUANTITY (HTSUS)	19. GROSS WEIGHT	20. SEPARATE VALUE & AGGR CHGS.
1 C/O FR	(20') TANK CONTAINER: 3,4-DICHLOROPHENYLISOCYANATE (3,4-DCPI) TOXIC LIQUID HAZARDOUS CARGO CLASS 6.1 UN 2250 P.G. II EMERGENCY TELEPHONE: (800) 424-9390 CONTAINER NUMBER EXFU-130581-1 ZONE-TO-ZONE TRANSFER NPF FTZ #2 ADMISSION No. 23971	2929.10.3000	19500 KG	23500 KG	\$102375. CIF \$1497. NDC \$100878. FOB
21. HARBOR MAINTENANCE FEE (19 CFR 24.24) <input checked="" type="checkbox"/>					

22. I hereby apply for admission of the above merchandise into the Foreign-Trade Zone. I declare to the best of my knowledge and belief that the above merchandise is not prohibited entry into the Foreign-Trade Zone within the meaning of section 3 of the Foreign-Trade Zones Act of 1934, as amended, and section 146.31, Customs Regulations.

23. I hereby apply for the status designation indicated:
 NONPRIVILEGED FOREIGN (19 CFR 146.42) PRIVILEGED FOREIGN (19 CFR 146.41) ZONE RESTRICTED (19 CFR 146.44) DOMESTIC (19 CFR 146.43)

24. APPLICANT FIRM NAME CEDAR CHEMICAL CORPORATION
25. BY (Signature) Bob Christie
26. TITLE Mgr Purch
27. DATE 7-16-97

F.T.Z. AGREES TO RECEIVE MERCHANDISE INTO THE ZONE
28. FOR THE F.T.Z. OPERATOR (Signature) Bob Christie
29. TITLE Mgr Purch
30. DATE 7-16-97

PERMIT Permission is hereby granted to transfer the above merchandise into the Zone.
31. DISTRICT DIRECTOR OF CUSTOMS BY (Signature) [Signature]
32. TITLE Inspector
33. DATE 7-15-97

PERMIT The above merchandise has been granted the requested status.
34. DISTRICT DIRECTOR OF CUSTOMS BY (Signature) [Signature]
35. TITLE Inspector
36. DATE 7-15-97

37. The goods described herein are authorized to be transferred: without exception except as noted below

PERMIT TO TRANSFER
38. CUSTOMS OFFICER AT STATION (Signature) [Signature]
39. TITLE Inspector
40. STATION
41. DATE 7-15-97

42. RECEIVED FOR TRANSFER TO ZONE (Driver's Signature)
43. CARTMAN
44. CHL NO.
45. DATE

FTZ OPERATOR'S REPORT OF MERCHANDISE RECEIVED AT ZONE
46. To the District Director of Customs: The above merchandise was received at the Zone on the date shown except as noted below:

47. FOR THE FTZ OPERATOR (Signature) Bob Christie
48. TITLE Mgr Purchasing
49. DATE 7-16-97

(Paperwork Reduction Act Notice on Reverse) Customs Form 212 (02/95)

TOLOCHIMIE

ADRESSER VOTRE CORRESPONDANCE A

TOLOCHIMIE - Impasse PALAYRÉ
B P 1196 - 31037 TOULOUSE CEDEX 1

TÉL. : 05 61 31 78 78

TÉLÉCOPIE 05 61 31 78 50

N / REF : MF /ML

DATE 14-Mai-97

CEDAR

COMMANDE N° 401 27462
EXPEDITION N° 296
DU 14 Mai 97

CAMION CITERNE N°
CONTAINER N° EXFU 130581-1
WAGON N°

N° DE LOT DU PRODUIT B303A/14.5.97.5

N° DE LOT DU CONDITIONNEMENT

(s' il y a lieu)

CERTIFICAT D'ANALYSE DU 3,4-DICHLOROPHENYLISOCYANATE (ex 3,4-DCA CEDARI)

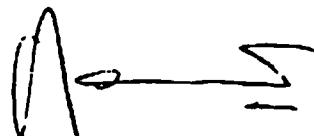
Nous certifions que le produit ci-dessus a la composition suivante :

M E T H O D E	Détermination	Valeur	Unité	Spécification	Méthode d'analyse Tolochimie
1	aspect	conforme		solide blanc	Visuelle
2	3,4-dichlorophénylisocyanate	99.65	%	> 98.5	To 10.27.88
2	2,3-dichlorophénylisocyanate	0.27	%	pour information	To 10.27.88
2	3-chloro + 4-chlorophénylisocyanate	0	%	pour information	To 10.27.88
2	monochlorobenzène	0	%	< 0.2	To 10.27.88
2	semi-lourds	0.02	%	< 0.8	To 10.27.88
autre	isocyanate de chlorotolyle	0.06	%		To 10.27.88
autre			%		

principe de la méthode:

1	visuelle
2	C.P.G
autre	
autre	

LE RESPONSABLE DU CONTROLE ANALYTIQUE



AB0000018635

RHONE-POULENC AGRO

14-20, RUE PIERRE BAIZET B P 9163
 69263 LYON CEDEX 09 - FRANCE
 TEL 04 72 85 25 25 - FAX 04 72 85 27 89
 TUX 310 088 F RHÔNE
 N° IDENTIFICATION TVA FR 53 969 503 309

ORIGINAL

INVOICE FOR EXPORT DATED 27.05.1997
 27.05.1997

CONSIGNEUR :
 CLIENT :
 ATIN : 805 CHRISTIAN
 HW 221 SOUTH
 HW 2200 WEST HESBIA
 UNITED STATES

INVOICEE :
 CLIENT :
 ATIN : 805 CHRISTIAN
 P.O. BOX BOX 2149
 AP 72090 WEST HESBIA
 UNITED STATES

DEPART : 01 4012742 001
 DEPART : 40065 7
 MISE EN MARCHÉ :
 TERME DE LIVRAISON : CIF - 100% INC FRET
 TERMS OF PAYMENT : 90 DAYS INVOICE DATE
 PAYMENT DATE : 23.08.1997
 PAYMENT MOIE : TELEGRAPHIC TRANSFER
 CURRENCY : USD

EC : NEW ORLEANS

QUANTITE : 18575000
 NET WEIGHT : 34 000 000 G
 UNIT : 39200 000 G
 UNIT PRICE : 5.25 USD PER 100 G
 PLUM :

SH 17 : 2029190

RHONE-POULENC AGRO
 14-20 RUE PIERRE BAIZET
 69263 LYON CEDEX 09
 FRANCE

FORMULE DE DESTINATION : 14.05.1997

EXONERATION DE LA TVA DÉTERMINÉE AU CODE GÉNÉRAL DES IMPÔTS

LES DÉCLARATIONS DE TVA SONT À FAIRE PAR LE CLIENT DESTINATAIRE À L'ADRESSE SUIVANTE
 ENTREPRISES : ACCUEIL FUMERIE 100000
 LES DÉCLARATIONS DE TVA SONT À FAIRE PAR LE CLIENT DESTINATAIRE À L'ADRESSE SUIVANTE

RHÔNE-POULENC
 Si RHONE-POULENC AGRO
 14/20 Rue Pierre Baizet B P 9163
 69263 LYON CEDEX 09
 Tel 04 72 85 25 25 Fax 04 72 85 27 89
 SA Capital 1 431 515 000 F - RC LYON 8 969 503 309

CENSUS USE ONLY

DEPARTMENT OF THE TREASURY
UNITED STATES CUSTOMS SERVICE

APPLICATION FOR
FOREIGN-TRADE ZONE ADMISSION
AND/OR STATUS DESIGNATION

1 ZONE NO AND LOCATION (Address) CEDAR CHEMICAL CORPORATION FTZ 14B HIGHWAY 242 SOUTH WEST HELENA, ARKANSAS 72390
2. DISTRICT/PORT CODE 2006 MEMPHIS, TENNESSEE

19 CFR 146.22, 146.32, 146.35-146.37, 146.39-146.41, 148.44, 148.53, 148.66

3 IMPORTING VESSEL (& FLAG)/OTHER CARRIER (MX) M/V NUEVO LEON V.30W	4 EXPORT DATE 5/17/97	5. IMPORT DATE 6/7/97	6. ZONE ADMISSION NO. 1997020310
7 U.S. PORT OF UNLOADING NEW ORLEANS, LA.	8 FOREIGN PORT OF LADING LE HAVRE	9. BILL OF LADING/AWB NO TEMJLHNLN30W0628	10. HAZARDOUS INFEST NO N/A
11 INBOND CARRIER TRIPLE E TRANSPORT	12 IT NO AND DATE #313,963,646 6/30/97	13 I.T. FROM (Port) NEW ORLEANS, LA.	
14 STATISTICAL INFORMATION FURNISHED DIRECTLY TO BUREAU OF CENSUS BY APPLICANT? <input type="checkbox"/> YES <input type="checkbox"/> NO			

15 NO OF PACKAGES AND COUNTRY OF ORIGIN	16 DESCRIPTION OF MERCHANDISE	17 HTSUS NO	18 QUANTITY (HTSUS)	19 GROSS WEIGHT	20 SEPARATE VALUE & AGGR CHGS
1 C/O FR	(20') TANK CONTAINER: 3,4-DICHLOROPHENYLISOCYANATE (3,4-DCPI) TOXIC LIQUID HAZARDOUS CARGO CLASS 6.1 UN 2250 P.G. II EMERGENCY TELEPHONE: (800) 424-9390 CONTAINER NUMBER CCRU-197208-4 ZONE-TO-ZONE TRANSFER NPF FTZ #2 ADMISSION No. 23971	2929.10.3000	17750 KG	21640 KG	\$93188. CIF \$1363. NDC \$91825. FOB
21 HARBOR MAINTENANCE FEE (19 CFR 24.24) <input type="checkbox"/>					

22 I hereby apply for admission of the above merchandise into the Foreign-Trade Zone. I declare to the best of my knowledge and belief that the above merchandise is not prohibited entry into the Foreign-Trade Zone within the meaning of section 3 of the Foreign-Trade Zones Act of 1934, as amended, and section 146.31, Customs Regulations

23 I hereby apply for the status designation indicated

NONPRIVILEGED FOREIGN (19 CFR 146.42) PRIVILEGED FOREIGN (19 CFR 146.41) ZONE RESTRICTED (19 CFR 146.44) DOMESTIC (19 CFR 146.43)

24 APPLICANT FIRM NAME CEDAR CHEMICAL CORPORATION	25 BY (Signature) <i>Bob Christian</i>	26 TITLE Mgr. Purch	27 DATE 7-11-97
F.T.Z. AGREES TO RECEIVE MERCHANDISE INTO THE ZONE <input type="checkbox"/>	28 FOR THE FTZ OPERATOR (Signature) <i>Bob Christian</i>	29 TITLE Mgr. Purch	30 DATE 7-11-97
PERMIT	31 DISTRICT DIRECTOR OF CUSTOMS BY (Signature)	32 TITLE	33 DATE
PERMIT	34 DISTRICT DIRECTOR OF CUSTOMS BY (Signature)	35 TITLE	36 DATE

37 The goods described herein are authorized to be transferred without exception except as noted below

PERMIT TO TRANSFER	38 CUSTOMS OFFICER AT STATION (Signature)	39 TITLE	40 STATION	41 DATE
	42. RECEIVED FOR TRANSFER TO ZONE (Driver's Signature)	43 CARTMAN	44 CHL NO	45 DATE

FTZ OPERATOR'S REPORT OF MERCHANDISE RECEIVED AT ZONE	46 To the District Director of Customs The above merchandise was received at the Zone on the date shown except as noted below WEIGHT DISCREPANCY OF +/- .05% ACTUAL DELIVERED WEIGHT IS 17,845KG			
	47 FOR THE FTZ OPERATOR (Signature) <i>Bob Christian</i>	48 TITLE Mgr. Purch	49 DATE 7-11-97	

CENSUS USE ONLY

DEPARTMENT OF THE TREASURY
UNITED STATES CUSTOMS SERVICE

APPLICATION FOR
FOREIGN-TRADE ZONE ADMISSION
AND/OR STATUS DESIGNATION

19 CFR 148.22, 148.32, 148.35-148.37, 148.39-148.41, 148.44, 148.53, 148.66

1. ZONE NO. AND LOCATION (Address) CEDAR CHEMICAL CORPORATION FTZ 14B HIGHWAY 242 SOUTH WEST HELENA, ARKANSAS 72390
2. DISTRICT/PORT CODE 2006. MEMPHIS, TENNESSEE

3. IMPORTING VESSEL (& FLAG)/OTHER CARRIER (MX) M/V. NUEVO LEON V.30N	4. EXPORT DATE 5/17/97	5. IMPORT DATE 6/7/97	6. ZONE ADMISSION NO. 199700310 1997003-12
7. U.S. PORT OF UNLADING NEW ORLEANS, LA.	8. FOREIGN PORT OF LADING LE HAVRE	9. BILL OF LADING/AWB NO. TEMULHNLN30W0628	10. INWARD M/FEST NO. N/A
11. INBOND CARRIER TRIPLE E TRANSPORT	12. I.T. NO. AND DATE #313.963.646 6/30/97	13. I.T. FROM (Port) NEW ORLEANS, LA.	

15 NO OF PACKAGES AND COUNTRY OF ORIGIN	16 DESCRIPTION OF MERCHANDISE	17. HTSUS NO.	18. QUANTITY (HTSUS)	19. GROSS WEIGHT	20 SEPARATE VALUE & AGGR CHGS.
1 C/O FR	(20') TANK CONTAINER: 3,4-DICHLOROPHENYLISOCYANATE (3,4-DCPI) TOXIC LIQUID HAZARDOUS CARGO CLASS 6.1 UN 2250 P.G. II EMERGENCY TELEPHONE: (800) 424-9390 CONTAINER NUMBER CCRU-197208-4 ZONE-TO-ZONE TRANSFER NPF FTZ #2 ADMISSION No. 23971	2929.10.3000	17750 KG	21640 KG	\$93188. CIF \$1363. NDC \$91825. FOB
21. HARBOR MAINTENANCE FEE (19 CFR 24.24) <input type="checkbox"/>					

22 I hereby apply for admission of the above merchandise into the Foreign-Trade Zone. I declare to the best of my knowledge and belief that the above merchandise is not prohibited entry into the Foreign-Trade Zone within the meaning of section 3 of the Foreign-Trade Zones Act of 1934, as amended, and section 148.31, Customs Regulations

23 I hereby apply for the status designation indicated.

NONPRIVILEGED FOREIGN (19 CFR 148.42) PRIVILEGED FOREIGN (19 CFR 148.41) ZONE RESTRICTED (19 CFR 148.44) DOMESTIC (19 CFR 148.43)

24 APPLICANT FIRM NAME CEDAR CHEMICAL CORPORATION	25. BY (Signature) <i>Bob Christie</i>	26 TITLE MGR PURCH	27. DATE 7-11-97
F.T.Z. AGREES TO RECEIVE MERCHANDISE INTO THE ZONE <input type="checkbox"/>	28. FOR THE F.T.Z. OPERATOR (Signature) <i>Bob Christie</i>	29 TITLE MGR PURCH	30 DATE 7-11-97
PERMIT Permission is hereby granted to transfer the above merchandise into the Zone.	31. DISTRICT DIRECTOR OF CUSTOMS: BY (Signature)	32. TITLE	33. DATE
PERMIT The above merchandise has been granted the requested status.	34. DISTRICT DIRECTOR OF CUSTOMS: BY (Signature)	35. TITLE	36. DATE

37. The goods described herein are authorized to be transferred: without exception except as noted below

38. CUSTOMS OFFICER AT STATION (Signature)	39. TITLE	40. STATION	41. DATE
42. RECEIVED FOR TRANSFER TO ZONE (Driver's Signature)	43. CARTMAN	44. CHL NO	45. DATE

FTZ OPERATOR'S REPORT OF MERCHANDISE RECEIVED AT ZONE	46. To the District Director of Customs: The above merchandise was received at the Zone on the date shown except as noted below: WEIGHT DISCREPANCY OF +/- .05% ACTUAL DELIVERED WEIGHT IS 17,845KG	
47. FOR THE FTZ OPERATOR (Signature) <i>Bob Christie</i>	48 TITLE MGR PURCH	49 DATE 7-11-97

REF: 973255
19 CFR 10.60, 10.61, 18, 123.41, 123.42

TRANSPORTATION ENTRY AND MANIFEST OF
GOODS SUBJECT TO CUSTOMS INSPECTION
AND PERMIT

403

Form Approved
OMB No 1515-0005

FTZ Entry No. **23971**
Port **NEW ORLEANS, LA.**
Date **6/11/97**

Entry No. **313,963,646**
Class of Entry: **I.T. (61)**
(I.T.)(Wd.T.)(Wd.Ex.)(T.E.)(Drawback, etc.)

UNITED STATES CUSTOMS SERVICE

Dist. No. **20** Port Code No. **02** First U.S. Port of Unlading **NEW ORLEANS, LA.**
Port of **NEW ORLEANS, LA.** Date **6/30/97**

Entered or imported by **CEDAR CHEMICAL CORPORATION** to be shipped
in bond via **TRIPLE E TRANSPORT BOND No. 209100312** consigned to
(CHL Number) (Vessel or carrier) (C# number and initial) (Pier or station)
District Director of Customs At **2006 MEMPHIS, TN** Final foreign destination
(For exportations only)
Consignee **CEDAR CHEMICAL CORP. FTZ 14B HIGHWAY 242 SOUTH WEST HELENA, ARKANSAS 72390**
(At customs port of exit or destination)
Foreign port of lading **LE HAYRE** B/L No. **TEHHLH13040628** Date of sailing **5/17/97**
(Above information to be furnished only when merchandise is imported by vessel)
Imported on the **N/V NUEVO LEON V. 304** Flag **MX** on **6/7/97** via **DIRECT**
(Name of vessel or carrier and motive power) (Date imported) (Last foreign port)
Exported from **FRANCE** on **5/17/97** Goods now at **FOREIGN TRADE ZONE No. 2**
(Country) (Date) (Name of warehouse, station, pier, etc.)

Marks and Numbers of Packages	DESCRIPTION AND QUANTITY OF MERCHANDISE NUMBER AND KIND OF PACKAGES (Describe fully as per shipping papers)	GROSS WEIGHT IN POUNDS	VALUE (Dollars only)	RATE	DUTY
CCRU-197208-4	1 (20') TANK CONTAINER: 3,3-DICHLOROPHENYLISOCYANATE (3,4-DCPI) TOXIC LIQUID HAZARDOUS CARGO CLASS 6.1 UN 2250 P.G. II SAFETY SHEET: 6.1 - 04 M.F.A.G. TABLE: 370 EMERGENCY TELEPHONE: (800) 424-9390 HTSUS 2929.10.3000 C/O FR NFG: FRH0AGRI420LYO ZONE-TO-ZONE TRANSFER NPF FTZ #2 ADMISSION #23971	47708	93188	EST.	NOT VERIFIED

FTZ 14B
DIRECT DELIVERY PROGRAM
7-3-97
Bob White
SIGNATURE

G.O. No.
CERTIFICATE OF LADING FOR TRANSPORTATION IN BOND AND/OR LADING FOR EXPORTATION FOR
2006 MEMPHIS, TENNESSEE
 WITH THE EXCEPTIONS NOTED ABOVE, THE WITHIN-DESCRIBED GOODS WERE:
 Delivered to the Carrier named above, for delivery to the District Director of Customs at destination sealed with Customs seals
 Laden on the—
 (vessel, vehicle, or aircraft)
 which cleared for—
 on
 (Date)
 as verified by export records
 (Inspector or warehouse officer)
 (Date)

I truly declare that the statements contained herein are true and correct to the best of my knowledge and belief.
 Entered or withdrawn by **CEDAR CHEMICAL CORPORATION**
 by **PHILBIN, CAZALAS & SANCHEZ, P.C.**
 Atty in fact
 to the Inspector or Warehouse Officer, the above-described goods shall be disposed of as specified hereon.
 For the District Director of Customs.
 Received from the District Director of Customs of above district the merchandise described in this manifest for transportation and delivery into the custody of the customs officers at the port named above, all packages in apparent good order except as noted hereon.
TRIPLE E TRANSPORT
[Signature]
 Attorney or Agent of Carrier

Approved through 01/31/94. OMB No. 1515-0088

CENSUS USE ONLY

DEPARTMENT OF THE TREASURY
UNITED STATES CUSTOMS SERVICE

**APPLICATION FOR
FOREIGN-TRADE ZONE ADMISSION
AND/OR STATUS DESIGNATION**

19 CFR 148.22, 148.23, 148.25-148.37, 148.39-148.41, 148.44, 148.63, 148.65

1. ZONE NO. AND LOCATION (Address)
**CEDAR CHEMICAL CORPORATION
FTZ 14B
HIGHWAY 242 SOUTH
WEST HELENA, ARKANSAS 72390**

2. DISTRICT/PORT CODE
2006 MEMPHIS, TENNESSEE

3. REPORTING VESSEL (A FLAG) OTHER CARRIER
(MS) MAY NUEVO LEON V. 30N

4. EXPORT DATE
5/17/97

5. DEPART DATE
6/7/97

6. ZONE NO. AND LOCATION (Address)
1007642-10

7. U.S. PORT OF UNLOADING
NEW ORLEANS, LA.

8. FOREIGN PORT OF LADING
LE HAVRE

9. BILL OF LADING/AMS NO.
TEMUHLN30H0628

10. INWARDManifest NO.
N/A

11. INBOUND CARRIER
TRIPLE E TRANSPORT

12. LT. NO. AND DATE
#313,863,646 6/30/97

13. LT. FROM (Port)
NEW ORLEANS, LA.

14. STATISTICAL INFORMATION FURNISHED DIRECTLY TO BUREAU OF CENSUS BY APPLICANT
 YES NO

15. NO. OF PACKAGES AND COUNTRY OF ORIGIN	16. DESCRIPTION OF MERCHANDISE	17. HTSUS NO.	18. QUANTITY (HTSUS)	19. GROSS WEIGHT	20. SEPARATE VALUE & AGGR CHGS.
1 C/O FR	(20') TANK CONTAINER: 3,4-DICHLOROPHENYLISOCYANATE (3,4-DCPI) TOXIC LIQUID HAZARDOUS CARGO CLASS 6.1 UN 2250 P.G. II EMERGENCY TELEPHONE: (800) 424-9390 CONTAINER NUMBER: CCRU-197208-4 ZONE-TO-ZONE TRANSFER NPF FTZ #2 ADMISSION No. 23971	2929.10.3000	17750 KG	21640 KG	\$93188. CIF \$1363. NDC \$91825. FOB
21. HARBOR MAINTENANCE FEE (19 CFR 24.26) <input checked="" type="checkbox"/>					

22. I hereby apply for admission of the above merchandise into the Foreign-Trade Zone. I declare to the best of my knowledge and belief that the above merchandise is not prohibited entry into the Foreign-Trade Zone within the meaning of section 3 of the Foreign-Trade Zones Act of 1934, as amended, and section 148.31, Customs Regulations.

23. I hereby apply for the status designation indicated:

NONPRIVILEGED FOREIGN (19 CFR 148.42) PRIVILEGED FOREIGN (19 CFR 148.41) ZONE RESTRICTED (19 CFR 148.44) DOMESTIC (19 CFR 148.43)

24. APPLICANT FIRM NAME
CEDAR CHEMICAL CORPORATION

25. SIGNATURE
Bob Christie

26. TITLE
Mgr Purch

27. DATE
7-11-97

F.T.Z. AGREES TO RECEIVE MERCHANDISE INTO THE ZONE

28. SIGNATURE
Bob Christie

29. TITLE
Mgr Purch

30. DATE
7-11-97

PERMIT

Permission is hereby granted to transfer the above merchandise into the Zone.

31. DISTRICT DIRECTOR OF CUSTOMS: BY (Signature)

32. TITLE

33. DATE

PERMIT

The above merchandise has been granted the requested status.

34. DISTRICT DIRECTOR OF CUSTOMS: BY (Signature)

35. TITLE

36. DATE

37. The goods described herein are authorized to be transferred: without exception except as noted below

PERMIT TO TRANSFER

38. CUSTOMS OFFICER AT STATION (Signature)
[Signature]

39. TITLE
SI

40. STATION

41. DATE
7-18-97

42. RECEIVED FOR TRANSFER TO ZONE (Owner's Signature)
[Signature]

43. CARTMAN

44. CHL NO.

45. DATE

FTZ OPERATOR'S REPORT OF MERCHANDISE RECEIVED AT ZONE

46. To the District Director of Customs: The above merchandise was received at the Zone on the date shown except as noted below:
WEIGHT DISCREPANCY OF +/- .06%
ACTUAL DELIVERED WEIGHT IS 17,845KG

47. SIGNATURE
Bob Christie

48. TITLE
Mgr Purch

49. DATE
7-11-97

REF: 973255
 19 CFR 101.18, 123.41, 123.42

TRANSPORTATION ENTRY AND MANIFEST OF
 GOODS SUBJECT TO CUSTOMS INSPECTION
 AND PERMIT

403

Form Approved
 OMB No 1515-0005

FTZ Entry No. **23971**
 Port **NEW ORLEANS, LA.**
 Date **6/11/97**

Entry No. **313,963,646**
 Class of Entry **I.T. (61)**
 (LT.)(WLT.)(WLEx.)(T.E.)(Drawback, etc.)

UNITED STATES CUSTOMS SERVICE

Dist No. **20** Port Code No. **02** First U.S. Port of Unlading **NEW ORLEANS, LA.**
 Port of **NEW ORLEANS, LA.** Date **6/30/97**

Entered or imported by **CEDAR CHEMICAL CORPORATION** to be shipped
 in bond via **TRIPLE E TRANSPORT** BOND No. **209100312** consigned to
 (CHL Number) (Vessel or carrier) (Certificate number and initial) (Per or station)
 District Director of Customs At **2006 MEMPHIS, TN** Final foreign destination
 Consignee **CEDAR CHEMICAL CORP.** FTZ **14B** **HIGHWAY 242 SOUTH** **NEST HELENA, ARKANSAS 72390**
 (At customs port of exit or destination) (For exportations only)
 Foreign port of lading **LE HAVRE** B/L No. **TERMINUS 000628** Date of sailing **5/17/97**
 (Above information to be furnished only when merchandise is imported by vessel)
 Imported on the **N/Y NUEVO LEON V. 30W** Flag **MX** on **6/7/97** via **DIRECT**
 (Name of vessel or carrier and motive power) (Date imported) (Last foreign port)
 Exported from **FRANCE** on **5/17/97** Goods now at **FOREIGN TRADE ZONE No. 2**
 (Country) (Date) (Name of warehouse, station, pier, etc.)

Marks and Numbers of Packages	DESCRIPTION AND QUANTITY OF MERCHANDISE NUMBER AND KIND OF PACKAGES (Describe fully as per shipping papers)	GROSS WEIGHT IN POUNDS	VALUE (Dollars only)	RATE	DUTY
RU-197208-4	1 (20') TANK CONTAINER: 3,7 DECHLOROPHENYLISOCYANATE (3,4-DCPI) TOXIC LIQUID HAZARDOUS CARGO CLASS 6.1 UN 2250 P.G. II SECURITY SHEET: 6.1 - 04 M.F.A.G. TABLE: 370 EMERGENCY TELEPHONE: (800) 424-9390 HTSUS 2929.10.3000 C/O FR NFB: FRH06R1420LYO ZONE-TO-ZONE TRANSFER NPF FTZ #2 ADMISSION #23971	47708	93188	EST. NOT VERIFIED	

FTZ 14B
 DIRECT DELIVERY PROGRAM
 7-3-97
Sub Chait
 SIGNATURE

C.O. No. _____

CERTIFICATE OF LADING FOR TRANSPORTATION IN BOND AND/OR LADING FOR EXPORTATION FOR
2006 MEMPHIS, TENNESSEE
 (Port)

WITH THE EXCEPTIONS NOTED ABOVE THE WITHIN-DESCRIBED GOODS WERE:
 Delivered to the Carrier named above, for delivery to the District Director of Customs at destination sealed with Customs seals

Laden on the—
 (Vessel, vehicle or aircraft)

which cleared for—

on _____ (Date)

as verified by export records.

(Inspector or warehouse officer) (Inspector) (Date) (Date)

I truly declare that the statements contained herein are true and correct to the best of my knowledge and belief.

Entered or withdrawn by **CEDAR CHEMICAL CORPORATION**
 by **PHILBIN, CAZALAS & ST. ANNE, INC.**
 Atty in fact

To the Inspector or Warehouse Officer, the above-described goods shall be disposed of as specified hereon.

For the District Director of Customs
 Received from the District Director of Customs of above district the merchandise described in this manifest for transportation and delivery into the custody of the customs officers at the port named above, all packages in apparent good order except as noted hereon.

TRIPLE E TRANSPORT
[Signature]
 Attorney or Agent of Carrier

RAW MATERIAL RECEIVING RECORD No 10051

CEDAR CHEMICAL 9000-1 REV: C

TIME IN AT GATE
1:15

RECEIVED BY
KC

SECTION 1

DATE	ORDER NO.	CAR OR TRUCK NO.	DECLARED WEIGHT
7-3-97	04-66882	CCRU-197208-4	Net MTA 39,132

SHIPPER	CARRIER
Phone DOUTONAC	EEE

QUANTITY	CONTAINER	DESTINATION	RAW MAT CODE #	DESCRIPTION
1	50A CONTAINER	2	4015A	DCOT

COMMENTS
SOA IN LAB

SECTION 2

RECIPIENT	TIME SAMPLE/CERTIFICATE TAKEN TO LAB

UNLOADED AT (tank number, unit, warehouse, etc.)

COMMENTS

SECTION 3

LAB TECHNICIAN	ACCEPT	REJECT	REASON FOR REJECTION
	-		

COMMENTS
(A) 94 (2) 1

SECTION 4

SHIFT SUPERVISOR	ACCEPT	REJECT	REASON FOR REJECTION
L. All	✓		

PLANT WEIGHT	UNLOADING TIMES	
NET	START TIME	END TIME

COMMENTS
There are some containers on Dept. 514

TOLOCHIMIE

ADRESSER VOTRE CORRESPONDANCE A :

TOLOCHIMIE - Impasse PALAYRÉ
B.P. 1196 - 31037 TOULOUSE CEDEX 1
TÉL. : 05 61 31 78 78
TÉLÉCOPIE : 05 61 31 78 50

N / REF : MF /ML

DATE 13-Mai-97

CEDAR

COMMANDE N° 40127462
EXPEDITION N° 417
DU 13 Mai 97

CAMION CITERNE N°
CONTAINER N° CCAU 197 208-4
WAGON N°

N° DE LOT DU PRODUIT B303A/13.5.97.5

N° DE LOT DU CONDITIONNEMENT
(s' il y a lieu)

CERTIFICAT D'ANALYSE DU 3,4-DICHLOROPHENYLISOCYANATE

Nous certifions que le produit ci-dessus a la composition suivante :

M E T H O D E	Détermination	Valeur	Unité	Spécification	Méthode d'analys Tolochimie
1	aspect	conforme		solide blanc	Visuelle
2	3,4-dichlorophénylisocyanate	99.64	%	> 98.5	To 10.27.88
2	2,3-dichlorophénylisocyanate	0.25	%	pour information	To 10.27.88
2	3-chloro+ 4-chlorophénylisocyanate	0	%	pour information	To 10.27.88
2	monochlorobenzène	0	%	< 0.2	To 10.27.88
2	semi-lourds	0.03	%	< 0.8	To 10.27.88
autre	isocyanate de chlorotolyle	0.08	%		
autre			%		

principe de la méthode:

1	visuelle
2	C.P.G
autre	
autre	

LE RESPONSABLE DU CONTROLE ANALYTIQUE



FOREIGN TRADE ZONE No. 2

New Orleans, La.

Date 7/2/97 Zone Lot No. 23971
 Storage Location Field Country of Origin FRANCE
 Destination (Country) Nor. Helms State ARKANSAS
 For Acct. of C. J. Chemical Corporation
 Delivered To T. P. E. Transport
 No. of Trucks 1 License No. _____ C. H. L. _____ Auto. Lic. _____
 R. R. Car Nos. _____

MARKS	NO. OF PKGS.	DESCRIPTION	WEIGHT
<u>C. J. Chemical</u>	<u>1</u>	<u>Dichlorophenylisocyanate</u>	
			<u>172.8 #</u>

Exceptions _____

RECEIVED IN GOOD ORDER
 By [Signature]
 Carrier's Signature

Released For Delivery [Signature]

372430

REF: 973255

19 CFR 101.10, 10.61, 18, 123.41, 123.42

TRANSPORTATION ENTRY AND MANIFEST OF GOODS SUBJECT TO CUSTOMS INSPECTION AND PERMIT

UNITED STATES CUSTOMS SERVICE

Form Approved OMB No. 1515-0005

403

Entry No. 313,963,646

Class of Entry I.T. (61) (L.T.)(W.I.T.)(W.I.Ex.)(T.E.)(Drawback, etc.)

FTZ Entry No. 23971

Port NEW ORLEANS, LA.

Date 6/11/97

Dist. No. 20 Port Code No. 02 First U.S. Port of Unlading NEW ORLEANS, LA.

Port of NEW ORLEANS, LA. Date 6/30/97

Entered or imported by CEDAR CHEMICAL CORPORATION to be shipped

In bond via TRIPLE E TRANSPORT BOND No. 209100312 consigned to District Director of Customs At 2006 MEMPHIS, TN Final foreign destination

Consignee CEDAR CHEMICAL CORP. FTZ 148 HIGHWAY 242 SOUTH WEST HELENA, ARKANSAS 72390

Foreign port of lading LE HAVRE B/L No. TENDHIL13000528 Date of sailing 5/17/97

Imported on the M/V NUEVO LEON V. 30M Flag MX on 6/7/97 via DIRECT

Exported from FRANCE on 5/17/97 Goods now at FOREIGN TRADE ZONE No. 2

Table with 6 columns: Marks and Numbers of Packages, DESCRIPTION AND QUANTITY OF MERCHANDISE, GROSS WEIGHT IN POUNDS, VALUE (Dollars only), RATE, DUTY. Row 1: 1 (20') TANK CONTAINER: 3,3-DICHLOROPHENYLISOCYANATE (3,3-DCPI) TOXIC LIQUID HAZARDOUS CARGO CLASS 6.1 UN 2250 P.G. II SECURITY SHEET: 6.1 - 04 N.E.A.G. TABLE: 370 EMERGENCY TELEPHONE: (800) 424-9390 HTSUS 2929.10.3000 C/O FR NFB: FRH0681420LYO ZONE-TO-ZONE TRANSFER NPF FTZ #2 ADMISSION #23971

G.O. No.

CERTIFICATE OF LADING FOR TRANSPORTATION IN BOND AND/OR LADING FOR EXPORTATION FOR

2006 MEMPHIS, TENNESSEE

WITH THE EXCEPTIONS NOTED ABOVE, THE WITHIN-DESCRIBED GOODS WERE:

Delivered to the Carrier named above, for delivery to the District Director of Customs at destination sealed with Customs seals

Laden on the--

(Vessel, vehicle, or aircraft)

which cleared for--

on (Date)

as verified by export records.

(Inspector)

(Date)

I truly declare that the statements contained herein are true and correct to the best of my knowledge and belief.

Entered or withdrawn by CEDAR CHEMICAL CORPORATION by PHILBIN, CAZALAS & COMPANY, INC. Atty in fact

To the Inspector or Warehouse Officer, the above-described goods shall be disposed of as specified hereon.

For the District Director of Customs.

Received from the District Director of Customs of above district the merchandise described in this manifest for transportation and delivery into the custody of the customs officers at the port named above, all packages in apparent good order except as noted hereon.

TRIPLE E TRANSPORT

Attorney or Agent of Carrier

INSTRUCTIONS

Consult customs officer of Part 18, Customs Regulations, for the appropriate number of copies required for entry, withdrawal, or manifest purposes.

For the purpose of transfer under the cartage or lighterage provisions of a proper bond to the place of shipment from the port of entry, extra copies bearing a stamp or notation as to their intended use may be required for local administration.

As the form is the same whether used as an entry or withdrawal or manifest, all copies may be prepared at the same time by carbon process, unless more than one vessel or vehicle is used, in which case a separate set of manifest must be prepared for each such vessel or vehicle.

Whenever this form is used as an entry or withdrawal, care should be taken that the kind of entry is plainly shown in the block in the upper right-hand corner of the face of the entry.

This form may be printed by private parties provided that the supply printed conforms to the official form in size, wording, arrangement, and quality and color of paper and ink. For sale by District Directors of Customs.

RECORD OF CARTAGE OR LIGHTERAGE

Delivered to Cartman or Lighterman in apparent good condition except as noted on this form.

CONVEYANCE	QUANTITY	DATE	DELIVERED	RECEIVED	RECEIVED
<i>TRUCK</i> BANK # 209100312	1 TANK	7/2/97	<i>Greg Jones</i> (Inspector or Warehouse Officer)	<i>Dan Palaw</i> (Cartman or Lighterman)	7/2/97 (Date) (Inspector)
			(Inspector or Warehouse Officer)	(Cartman or Lighterman)	(Date) (Inspector)
			(Inspector or Warehouse Officer)	(Cartman or Lighterman)	(Date) (Inspector)
			(Inspector or Warehouse Officer)	(Cartman or Lighterman)	(Date) (Inspector)
Total			(Warehouse proprietor)		

CERTIFICATES OF TRANSFER. (If required)

I certify that within - described goods were transferred by reason of _____ to _____ on _____ at _____ and sealed with _____ or seals Nos _____, and that goods were in same apparent condition as noted on original lading except _____
Inspector, Conductor, or Master

I certify that within - described goods were transferred by reason of _____ to _____ on _____ at _____ and sealed with _____ or seals Nos _____, and that goods were in same apparent condition as noted on original lading except _____
Inspector, Conductor, or Master

INSPECTED
at _____
on _____ (Date)
and seals found _____
Inspector

If transfer occurs within city limits of a customs port or station, customs officers must be notified to supervise transfer.

INSPECTOR'S REPORT OF DISCHARGE AT DESTINATION

Port _____ Station _____ (Date)

TO THE DISTRICT DIRECTOR OF CUSTOMS Delivering line _____ Car No _____ Initial _____
Arrived _____ (Date) Condition of car _____ of seals _____ of packages _____

Date of Delivery to Importer, or Gen Order	PACKAGES	No. and kind of Entry or General Order	Number Truck or Lighter No	CONDITIONS ETC

I certify above report is correct.

_____, Inspector.

USE ONLY

DEPARTMENT OF THE TREASURY
UNITED STATES CUSTOMS SERVICE

APPLICATION FOR
FOREIGN-TRADE ZONE ADMISSION
AND/OR STATUS DESIGNATION

1. ZONE NO. AND LOCATION (Address)
FOREIGN TRADE ZONE No. 2
NAPOLEON AVENUE WHARF
NEW ORLEANS, LA.

2. DISTRICT/PORT CODE
20 - 02 NEW ORLEANS, LA.

19 CFR 146.22, 146.32, 146.35-146.37, 146.39-146.41, 146.44, 146.53, 146.68

3. IMPORTING VESSEL (& FLAG)/OTHER CARRIER
(MX) M/V NUEVO LEON V.30W

4. EXPORT DATE
5/17/97

5. IMPORT DATE
6/7/97

6. ZONE ADMISSION NO.
23971

7. U.S. PORT OF UNLADING
NEW ORLEANS, LA.

8. FOREIGN PORT OF LADING
LE HAVRE

9. BILL OF LADING/AWB NO
TEMULHNLN30W062B

10. INWARD M/FEST NO.
N/A

11. INBOND CARRIER
N/A

12. I.T. NO AND DATE
N/A

13. I.T. FROM (Port)
N/A

14. STATISTICAL INFORMATION FURNISHED DIRECTLY TO BUREAU OF CENSUS BY APPLICANT? YES NO

15. NO OF PACKAGES AND COUNTRY OF ORIGIN	16. DESCRIPTION OF MERCHANDISE	17. HTSUS NO	18. QUANTITY (HTSUS)	19. GROSS WEIGHT	20. SEPARATE VALUE & AGGR CHGS
7 C/O FR	(20') TANK CONTAINERS: 3,4-DICHLOROPHENYLISOCYANATE (3,4-DCPI) TOXIC LIQUID HAZARDOUS CARGO CLASS 6.1 UN 2250 P.G. II EMERGENCY TELEPHONE: (800) 424-9390	2929.10.3000	132200 KG	159760 KG	\$694,050.CIF \$10,150.NDC \$683,900.FOB
21 HARBOR MAINTENANCE FEE (19 CFR 24.24) <input type="checkbox"/>					\$854.88

22. I hereby apply for admission of the above merchandise into the Foreign-Trade Zone. I declare to the best of my knowledge and belief that the above merchandise is not prohibited entry into the Foreign-Trade Zone within the meaning of section 3 of the Foreign-Trade Zones Act of 1934, as amended, and section 146.31, Customs Regulations.

23. I hereby apply for the status designation indicated:

NONPRIVILEGED FOREIGN (19 CFR 146.42) PRIVILEGED FOREIGN (19 CFR 146.41) ZONE RESTRICTED (19 CFR 146.44) DOMESTIC (19 CFR 146.43)

24. APPLICANT FIRM NAME
CEDAR CHEMICAL CORPORATION

25. BY (Signature)
PHILBIN, CAZALAS & ST. JOHN INC. Atty in fact

26. TITLE
Atty in fact

27. DATE
6/10/97

F.T.Z. AGREES TO RECEIVE MERCHANDISE INTO THE ZONE

28. FOR THE F.T.Z. OPERATOR (Signature)

29. TITLE

30. DATE

PERMIT
Permission is hereby granted to transfer the above merchandise into the Zone.

31. DISTRICT DIRECTOR OF CUSTOMS, BY (Signature)

32. TITLE
INSP

33. DATE
6/11/97

PERMIT
The above merchandise has been granted the requested status.

34. DISTRICT DIRECTOR OF CUSTOMS, BY (Signature)

35. TITLE
INSP

36. DATE
6/11/97

37. The goods described herein are authorized to be transferred without exception except as noted below

PERMIT TO TRANSFER

38. CUSTOMS OFFICER AT STATION (Signature)
Thomas P. O'Connell

39. TITLE
GULF STATES CARTAGE

40. STATION
CHL #187

41. DATE
6/10/97

42. RECEIVED FOR TRANSFER TO ZONE (Driver's Signature)

43. CARTMAN

44. CHL NO

45. DATE

FTZ OPERATOR'S REPORT OF MERCHANDISE RECEIVED AT ZONE

46. To the District Director of Customs: The above merchandise was received at the Zone on the date shown except as noted below
CCR4 1970 77-6 FR2076 SIDE SIDE DENT

AUDIT INSPECTOR FTZ #2

47. FOR THE FTZ OPERATOR (Signature)

48. TITLE
W/BE SUP

49. DATE
6-13-97

69263 LYON CEDEX 09 - FRANCE
TEL 04 72 85 25 25 - FAX 04 72 85 27 89
TLX 310 088 F RHONE
N° IDENTIFICATION TVA . FR 53 989 503 309

INVOICE N° 2012047 DATED 23.05.1997
Date: 05/29

CONSIGNEE: U.S. (BY)
CEDAR CHEMICAL CORPORATION
ATTN: BOB CHRISTIAN
HWY 242 SOUTH
AR 72390 WEST HELENA
UNITED STATES

DEPART: U.S. (BY)
CEDAR CHEMICAL CORPORATION
ATTN: BOB CHRISTIAN
P.O. BOX 2749
AR 72390 WEST HELENA
UNITED STATES

QTY: 1 01 401 482 700 000
VARI: 01056077
SHIPPING BY:
TERMS OF DELIVERY: CIF - 1051 115 115 115
TERMS OF PAYMENT: 90 DAYS INVOICE DATE
PAYMENT DATE: 21.08.1997
PAYMENT MOD: TELEGRAPHIC TRANSFER
CURRENCY: USD

TO: NEW ORLEANS

PRODUCT CODE: 18070001
CUST. MATERIAL NO: 04 1000 01000
QUANTITY: 1 0290 000 00
UNIT PRICE: 5 05 150 000 00
AMOUNT: 524 000 000 00

REF: 2271000

REMARKS:
18070001 1000000000
04 1000 01000
04 1000 01000
04 1000 01000
04 1000 01000

TOTAL TO BE PAID: 524 000 000 00

EXPLICATION DES ABREVIATIONS UTILISEES DANS LE PRESENT DOCUMENT:
C.I.F. = COÛT ASSURANCE FRET
U.S. (BY) = UNITED STATES (BY)
P.O. BOX = POST OFFICE BOX

[Signature]
SA POULENC AROCHIME
13 Pierre BAZET 8 P 9163
63 LYON CEDEX 09
Tel 04 72 85 25 25 - Fax 04 72 85 27 89
S.A. Capital 1 431 515 000 F - R.C. LYON B 989 503 309

DEPARTMENT OF THE TREASURY
UNITED STATES CUSTOMS SERVICE

APPLICATION FOR
FOREIGN-TRADE ZONE ADMISSION
AND/OR STATUS DESIGNATION

CENSUS USE ONLY

19 CFR 146.22, 146.32, 146.35, 146.37, 146.39-146.41, 146.44, 146.53, 146.65

1 ZONE NO AND LOCATION (Address)
CEDAR CHEMICAL CORPORATION
FTZ 14B
HIGHWAY 242 SOUTH
WEST HELENA, ARKANSAS 72390

2 DISTRICT/PORT CODE
20 - 06 MEMPHIS, TENNESSEE

3 IMPORTING VESSEL (& FLAG)/OTHER CARRIER
(AM) S/S SEA-LAND PERFORMANCE

4 EXPORT DATE
5/24/97

5 IMPORT DATE
6/9/97

6 ZONE ADMISSION NO
19970620-10

7 U.S. PORT OF UNLADING
HOUSTON, TEXAS

8 FOREIGN PORT OF LADING
LE HAVRE

9 BILL OF LADING/AWB NO
POCLLHB721278875

10 INWARD M'FEST NO
N/A

11 INBOND CARRIER
TRIPLE E TRANSPORT

12 IT NO AND DATE
#313,963,576 6/19/97

13 IT FROM (Port)
NEW ORLEANS, LA.

14 STATISTICAL INFORMATION FURNISHED DIRECTLY TO BUREAU OF CENSUS BY APPLICANT? YES NO

15 NO OF PACKAGES AND COUNTRY OF ORIGIN	16 DESCRIPTION OF MERCHANDISE	17 HTSUS NO	18 QUANTITY (HTSUS)	19 GROSS WEIGHT	20 SEPARATE VALUE & ACCH CHGS
2 C/O FR	(20') TANK CONTAINERS: 3-4-DICHLOROPHENYLISOCYANATE (3,4-DCPI) TOXIC LIQUID HAZARDOUS CARGO CLASS 6.1 UN 2250 P.G. II SECURITY SHEET: 6.1 - 04 M.F.A.G. TABLE: 370 EMERGENCY TELEPHONE: (800) 424-9390	2929.10.3000	39000 Kg	46620 Kg	\$204,750. CI \$3,581. ND \$201,169. FO
<div style="border: 1px solid black; padding: 5px; display: inline-block;"> FTZ 14B DIRECT DELIVERY PROGRAM SIGNATURE </div>					
21 HARBOR MAINTENANCE FEE (19 CFR 24.24) <input checked="" type="checkbox"/>					\$251.46

22 I hereby apply for admission of the above merchandise into the Foreign Trade Zone. I declare to the best of my knowledge and belief that the above merchandise is not prohibited entry into the Foreign Trade Zone within the meaning of section 3 of the Foreign Trade Zones Act of 1934, as amended, and section 146.31, Customs Regulations.

23 I hereby apply for the status designation indicated

NONPRIVILEGED FOREIGN (19 CFR 146.42) PRIVILEGED FOREIGN (19 CFR 146.41) ZONE RESTRICTED (19 CFR 146.44) DOMESTIC (19 CFR 146.43)

24 APPLICANT FIRM NAME
CEDAR CHEMICAL CORPORATION

25 BY (Signature)
Bob Christie

26 TITLE
Mgr. Purchasing

27 DATE
7-1-97

FTZ AGREES TO RECEIVE MERCHANDISE INTO THE ZONE

28 FOR THE FTZ OPERATOR (Signature)
Bob Christie

29 TITLE
Mgr. Purchasing

30 DATE
7-1-97

PERMIT
Permission is hereby granted to transfer the above merchandise into the Zone.

31 DISTRICT DIRECTOR OF CUSTOMS BY (Signature)

32 TITLE

33 DATE

PERMIT
The above merchandise has been granted the requested status.

34 DISTRICT DIRECTOR OF CUSTOMS BY (Signature)

35 TITLE

36 DATE

37 The goods described herein are authorized to be transferred without exception except as noted below

PERMIT TO TRANSFER

38 CUSTOMS OFFICER AT STATION (Signature)
James Davis

39 TITLE

40 STATION

41 DATE

42 RECEIVED FOR TRANSFER TO ZONE (Driver's Signature)
James Davis

43 CARTMAN

44 CHL NO

45 DATE
6-20-97

FTZ OPERATOR'S REPORT OF MERCHANDISE RECEIVED AT ZONE

46 To the District Director of Customs. The above merchandise was received at the Zone on the date shown except as noted below
DISCREPANCY OF +/- .05%
UTCU457005.4 - ACTUAL DELIVERED WEIGHT OF 43,580 LBS.
UTCU457006.0 - ACTUAL DELIVERED WEIGHT OF 43,920 LBS.

47 RECEIVED AT ZONE
Bob Christie

48 TITLE
Mgr. Purchasing

49 DATE
6-20-97

AMS

Form Approved
OMB No 1515-0005REF: 973242
19 CFR 10.60, 10.61, 18, 123.41, 123.42TRANSPORTATION ENTRY AND MANIFEST OF
GOODS SUBJECT TO CUSTOMS INSPECTION
AND PERMIT

403

I.T. Entry No. **V13-22010763**
Port **HOUSTON, TEXAS**
Date **6/9/97**

UNITED STATES CUSTOMS SERVICE

Dist No **20** Port Code No **02** First U.S. Port of Unloading **HOUSTON, TEXAS**
Port of **NEW ORLEANS, LA.** Date **6/19/97**Entry No. **313,963,576**
Class of Entry **I.T. (61)**
(I.T.)(Wd.T.)(Wd.Ex.)(T.E.)(Drawback, etc.)Entered or imported by **CEDAR CHEMICAL CORPORATION** to be shipped
in bond via **TRIPLE E TRANSPORT** BOND No. **209100312** consigned to
District Director of Customs At **2006 MEMPHIS, TN** Final foreign destination
Consignee **CEDAR CHEMICAL CORP.** FTZ **14B** **HIGHWAY 242 SOUTH WEST HELENA, ARKANSAS 72390**
Foreign port of lading **LE HAVRE** B.L. No. **FEELHB721278875** Date of sailing **5/24/97**
Imported on the **S/S SEA-LAND PERFORMANCE** Flag **US** on **6/9/97** via **DIRECT**
Exported from **FRANCE** on **5/24/97** Goods now at **AVONDALE CONTAINER YARD WEST**

Marks and Numbers of Packages	DESCRIPTION AND QUANTITY OF MERCHANDISE NUMBER AND KIND OF PACKAGES (Describe fully as per shipping papers)	GROSS WEIGHT IN POUNDS	VALUE (Dollars only)	RAIL	DUTY
UTCU-457005-4 UTCU-457006-0	2 (20') TANK CONTAINERS: 3,4-DICHLOROPHENYLISOCYANATE (3,4-DCPI) TOXIC LIQUID HAZARDOUS CARGO CLASS 6.1 UN 2250 P.G. II SECURITY SHEET: 6.1 - 04 M.F.A.G. TABLE: 370 EMERGENCY TELEPHONE: (800) 424-9390 HTSUS 2929.10.3000 C/O FR MFG: FRRHOAGR1420LYO	102778	204750	EST. NOT VERIFIED	
	FTZ 14B DIRECT DELIVERY PROGRAM 6/23/97 <i>Bob Christy</i> SIGNATURE!				

GO No _____

CERTIFICATE OF LADING FOR TRANSPORTATION IN BOND AND/OR LADING FOR EXPORTATION FOR **2006 MEMPHIS, TENNESSEE**

WITH THE EXCEPTIONS NOTED ABOVE, THE WITHIN DESCRIBED GOODS WERE Delivered to the Carrier named above, for delivery to the District Director of Customs at destination sealed with Customs seals

Laden on the _____ (Date)

which cleared for _____ (Date)

as verified by export records _____ (Date)

Received from the District Director of Customs of above district the merchandise described in this manifest for transportation and delivery into the custody of the customs officers at the port named above, all packages in apparent good order except as noted hereon.

Entered or withdrawn by **CEDAR CHEMICAL CORPORATION** by **PHILBIN, CAZAMAS ST. JOHN, INC. Atty in fact**

To the Inspector or Warehouse Officer The above-described goods shall be disposed of as specified herein

For the District Director of Customs.

TRIPLE E TRANSPORT

Customs Form 7512 (040984)

AB0000018572

RAW MATERIAL RECEIVING RECORD

No 9872

CEDAR CHEMICAL 9000-1 REV: C

TIME IN AT GATE
0800

RECEIVED BY
M. Sullivan

SECTION 1

DATE	ORDER NO.	CAR OF TRUCK NO.	DECLARED WEIGHT
6-20-97	na	UTC U457005-4	Net na 43320 ^{FTZ}

SHIPPER	CARRIER
<i>Hillcat</i>	<i>Triple E</i> CADAR 43309

QUANTITY	CONTAINER	DESTINATION	RAW MAT CODE #	DESCRIPTION
1	S/C	unit # 5	40150	DC P1

COMMENTS
no C.O.A.

SECTION 2

RECIPIENT	TIME SAMPLE/CERTIFICATE TAKEN TO LAB
<i>T. J. 1.1</i>	<i>1.1</i>

UNLOADED AT (tank number, unit, warehouse, etc.)
PK 17

COMMENTS

SECTION 3

IS TECHNICAL	ACCEPT	REJECT	REASON FOR REJECTION
<i>TLP</i>	<i>X</i>		

COMMENTS

SECTION 4

SHIPPER'S WEIGHT	ACCEPT	REJECT	REASON FOR REJECTION
<i>3.2</i>	<i>X</i>		

PLANT WEIGHT NET 43580	UNLOADING TIMES	
	START TIME	END TIME

COMMENTS

TE 6/20/47

WEIGHED ON A FAIRBANKS SCALE *cont*
47644570054

CUSTOMERS NAME _____
ADDRESS W Helena ave
COMMODITY full cont
CARRIER North State

REMARKS

77580 12:00AM .J 00 00

LBS. GROSS _____

16760 12:00AM .J 00 00

LBS. TARE - DRIVER ON _____ OFF _____

LBS. NET @ _____ PER LB. PRICE _____

60820 full cont only
17240
43500 NET
FAIRBANKS SCALE CAT. 083908

SHIPPER _____

WEIGHER _____

Approved through 01/31/94 OMB No. 1516-0086

CENSUS/USE ONLY

DEPARTMENT OF THE TREASURY
UNITED STATES CUSTOMS SERVICE

**APPLICATION FOR
FOREIGN-TRADE ZONE ADMISSION
AND/OR STATUS DESIGNATION**

19 CFR 146.22, 146.32, 146.35-146.37, 146.39-146.41, 146.44, 146.53, 146.66

1. ZONE NO. AND LOCATION (Address) CEDAR CHEMICAL CORPORATION FTZ 14B HIGHWAY 242 SOUTH WEST HELENA, ARKANSAS 72390
2. DISTRICT/PORT CODE 20 - 06 MEMPHIS, TENNESSEE

3. IMPORTING VESSEL (S FLAG)/OTHER CARRIER (AM) S/S SEA-LAND PERFORMANCE	4. EXPORT DATE 5/24/97	5. IMPORT DATE 6/9/97	6. ZONE ADMISSION NO. 19970620-10
7. U.S. PORT OF UNLADING HOUSTON, TEXAS	8. FOREIGN PORT OF LADING LE HAVRE	9. BILL OF LADING/AWS NO. POCLLKB721278875	10. INWARD M/FEST NO. N/A
11. INBOND CARRIER TRIPLE E TRANSPORT	12. I.T. NO. AND DATE #313,963,576 6/19/97	13. I.T. FROM (Port) NEW ORLEANS, LA.	
14. STATISTICAL INFORMATION FURNISHED DIRECTLY TO BUREAU OF CENSUS BY APPLICANT? <input type="checkbox"/> YES <input type="checkbox"/> NO			

15. NO. OF PACKAGES AND COUNTRY OF ORIGIN	16. DESCRIPTION OF MERCHANDISE	17. HTSUS NO.	18. QUANTITY (HTSUS)	19. GROSS WEIGHT	20. SEPARATE VALUE & AGGR CHGS.
2 C/O FR	(20) TANK CONTAINERS: 3-4-DICHLOROPHENYLISOCYANATE (3,4-DCPI) TOXIC LIQUID HAZARDOUS CARGO CLASS 6.1 UN 2250 P.G. II SECURITY SHEET: 6.1 - 04 M.F.A.G. TABLE: 370 EMERGENCY TELEPHONE: (800) 424-9390	2929.10.3000	39000 Kg	46620 Kg	\$204,750. CI \$3,581. ND \$201,169. FO
<div style="border: 1px solid black; padding: 5px; display: inline-block;"> FTZ 14B DIRECT DELIVERY PROGRAM SIGNATURE </div>					
31. HARBOR MAINTENANCE FEE (19 CFR 24.24) <input checked="" type="checkbox"/>					\$251.46

22. I hereby apply for admission of the above merchandise into the Foreign-Trade Zone. I declare to the best of my knowledge and belief that the above merchandise is not prohibited entry into the Foreign-Trade Zone within the meaning of section 3 of the Foreign-Trade Zones Act of 1934, as amended, and section 146.31, Customs Regulations.

23. I hereby apply for the status designation indicated:

NONPRIVILEGED FOREIGN (19 CFR 146.42) PRIVILEGED FOREIGN (19 CFR 146.41) ZONE RESTRICTED (19 CFR 146.44) DOMESTIC (19 CFR 146.43)

24. APPLICANT FIRM NAME CEDAR CHEMICAL CORPORATION	25. BY (Signature) <i>Bob Christie</i>	26. TITLE <i>Mgr Purchasing</i>	27. DATE <i>7-1-97</i>
F.T.Z. AGREES TO RECEIVE MERCHANDISE INTO THE ZONE <input checked="" type="checkbox"/>	28. FOR THE F.T.Z. OPERATOR (Signature) <i>Bob Christie</i>	29. TITLE <i>Mgr Purchasing</i>	30. DATE <i>7-1-97</i>
PERMIT Permission is hereby granted to transfer the above merchandise into the Zone.	31. DISTRICT DIRECTOR OF CUSTOMS: BY (Signature) <i>[Signature]</i>	32. TITLE <i>[Title]</i>	33. DATE <i>7/1/97</i>
PERMIT The above merchandise has been granted the requested status.	34. DISTRICT DIRECTOR OF CUSTOMS: BY (Signature) <i>[Signature]</i>	35. TITLE <i>[Title]</i>	36. DATE <i>7/1/97</i>

37. The goods described herein are authorized to be transferred without exception except as noted below

PERMIT TO TRANSFER	38. CUSTOMS OFFICER AT STATION (Signature) <i>[Signature]</i>	39. TITLE <i>S.I.</i>	40. STATION	41. DATE <i>7-18-97</i>
	42. RECEIVED FOR TRANSFER TO ZONE (Driver's Signature) <i>James [Signature]</i>	43. CARTMAN	44. CHL. NO.	45. DATE <i>6-20-97</i>

FTZ OPERATOR'S REPORT OF MERCHANDISE RECEIVED AT ZONE	46. As the District Director of Customs: The above merchandise was received at the Zone on the date shown except as noted below: DISCREPANCY OF +/- .05% UTCU457005.4 - ACTUAL DELIVERED WEIGHT OF 43,580 LBS. UTCU457006.0 - ACTUAL DELIVERED WEIGHT OF 43,920 LBS.	47. FROM THE FTZ OPERATOR (Signature) <i>Bob Christie</i>	48. TITLE <i>Mgr Purchasing</i>	49. DATE <i>6-20-97</i>
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(Paperwork Reduction Act Notice on Reverse)

Customs Form 214 (020691)

CENSUS USE ONLY

DEPARTMENT OF THE TREASURY
UNITED STATES CUSTOMS SERVICE

APPLICATION FOR
FOREIGN-TRADE ZONE ADMISSION
AND/OR STATUS DESIGNATION

1. ZONE NO. AND LOCATION (Address)
CEDAR CHEMICAL CORPORATION
FTZ 14B
HIGHWAY 242 SOUTH
WEST HELENA, ARKANSAS 72390

2. DISTRICT/PORT CODE
20 - 06 MEMPHIS, TENNESSEE

19 CFR 146.22, 146.32, 146.35-146.37, 146.39-146.41, 146.44, 146.53, 146.66

3. IMPORTING VESSEL (& FLAG)/OTHER CARRIER (AM) S/S SEA-LAND PERFORMANCE		4. EXPORT DATE 5/24/97	5. IMPORT DATE 6/9/97	6. ZONE ADMISSION NO
7 U.S. PORT OF UNLADING HOUSTON, TEXAS	8. FOREIGN PORT OF LADING LE HAVRE		9. BILL OF LADING/AWB NO. POCLLHB721278875	10. INWARD M'FEST NO. N/A
11. INBOND CARRIER TRIPLE E TRANSPORT	12. IT NO AND DATE #313,963,576 6/19/97		13. LT. FROM (Port) NEW ORLEANS, LA.	
14. STATISTICAL INFORMATION FURNISHED DIRECTLY TO BUREAU OF CENSUS BY APPLICANT? <input type="checkbox"/> YES <input type="checkbox"/> NO				

15 NO OF PACKAGES AND COUNTRY OF ORIGIN	16 DESCRIPTION OF MERCHANDISE	17 HTSUS NO	18 QUANTITY (HTSUS)	19 GROSS WEIGHT	20 SEPARATE VALUE & AGGR CHGS
2 C/O FR	(20') TANK CONTAINERS: 3-4-DICHLOROPHENYLISOCYANATE (3,4-DCPI) TOXIC LIQUID HAZARDOUS CARGO CLASS 6.1 UN 2250 P.G. II SECURITY SHEET: 6.1 - 04 M.F.A.G. TABLE: 370 EMERGENCY TELEPHONE: (800) 424-9390	2929.10.3000 FTZ 14B DIRECT DELIVERY PROGRAM	39000 Kg	46620 Kg	\$204,750. CIF \$3,581. NDC \$201,169. FOB
SIGNATURE					21 HARBOR MAINTENANCE FEE (19 CFR 24.24) <input checked="" type="checkbox"/> \$251.46

22 I hereby apply for admission of the above merchandise into the Foreign-Trade Zone. I declare to the best of my knowledge and belief that the above merchandise is not prohibited entry into the Foreign-Trade Zone within the meaning of section 3 of the Foreign-Trade Zones Act of 1934, as amended, and section 146.31, Customs Regulations

23 I hereby apply for the status designation indicated

NONPRIVILEGED FOREIGN (19 CFR 146.42) PRIVILEGED FOREIGN (19 CFR 146.41) ZONE RESTRICTED (19 CFR 146.44) DOMESTIC (19 CFR 146.43)

24 APPLICANT FIRM NAME CEDAR CHEMICAL CORPORATION	25 BY (Signature)	26 TITLE	27 DATE
FTZ AGREES TO RECEIVE MERCHANDISE INTO THE ZONE	28 FOR THE FTZ OPERATOR (Signature)	29 TITLE	30 DATE
PERMIT Permission is hereby granted to transfer the above merchandise into the Zone	31 DISTRICT DIRECTOR OF CUSTOMS BY (Signature)	32 TITLE	33 DATE
PERMIT The above merchandise has been granted the requested status.	34 DISTRICT DIRECTOR OF CUSTOMS BY (Signature)	35 TITLE	36 DATE

37 The goods described herein are authorized to be transferred without exception except as noted below

PERMIT TO TRANSFER	38. CUSTOMS OFFICER AT STATION (Signature)	39 TITLE	40 STATION	41 DATE
	42 RECEIVED FOR TRANSFER TO ZONE (Driver's Signature)	43 CARTMAN	44 CHL NO	45 DATE

46 To the District Director of Customs The above merchandise was received at the Zone on the date shown except as noted below

DISCREPANCY OF +/- .05%
JTC045/005.4 - ACTUAL DELIVERED WEIGHT OF 43,520 LBS.
JTC045/006.0 - ACTUAL DELIVERED WEIGHT OF 43,920 LBS.

FTZ OPERATOR'S REPORT OF MERCHANDISE RECEIVED AT ZONE	47 FOR THE FTZ OPERATOR (Signature)	48 TITLE	49 DATE
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AMS

Form Approved
OMB No. 1515-0005REF: 973242
19 CFR 10.60, 10.61, 18, 123.41, 123.42TRANSPORTATION ENTRY AND MANIFEST OF
GOODS SUBJECT TO CUSTOMS INSPECTION
AND PERMIT

403

Entry No. 313,963,576
Class of Entry I.T. (61) (I.T.)(Wd.T.)(Wd.Ex.)(T.E.)(Drawback, etc.)

I.T. Entry No. V13-22010763
Port HOUSTON, TEXAS
Date 6/9/97

UNITED STATES CUSTOMS SERVICE

Dist. No. 20	Port Code No. 02	First U.S. Port of Unlading HOUSTON, TEXAS
Port of NEW ORLEANS, LA		Date 6/19/97

Entered or imported by **CEDAR CHEMICAL CORPORATION** to be shipped
in bond via **TRIPLE E TRANSPORT** BOND No. **209100312** consigned to
District Director of Customs At **2006 MEMPHIS, TN** Final foreign destination
Consignee **CEDAR CHEMICAL CORP. FTZ 14B HIGHWAY 242 SOUTH WEST HELENA, ARKANSAS 72390**
Foreign port of lading **LE HAVRE** B/L No. **TRIPLE HB721278875** Date of sailing **5/24/97**
Imported on the **S/S SEA-LAND PERFORMANCE** Flag **US** on **6/9/97** via **DIRECT**
Exported from **FRANCE** on **5/24/97** Goods now at **AVONDALE CONTAINER YARD WEST**

Marks and Numbers of Packages	DESCRIPTION AND QUANTITY OF MERCHANDISE NUMBER AND KIND OF PACKAGES (Describe fully as per shipping papers)	GROSS WEIGHT IN POUNDS	VALUE (Dollars only)	RATE	DUCTY
UTCU-457005-4 UTCU-457006-0	2 (20') TANK CONTAINERS: 3,4-DICHLOROPHENYLISOCYANATE (3,4-DCPI) TOXIC LIQUID HAZARDOUS CARGO CLASS 6.1 UN 2250 P.G. II SECURITY SHEET: 6.1 - 04 M.F.A.G. TABLE: 370 EMERGENCY TELEPHONE: (800) 424-9390 HTSUS 2929.10.3000 C/O FR MFG: FRRHOAGR1420LYO	102778	204750	EST. NOT VERIFIED	
<div style="border: 1px solid black; padding: 5px; display: inline-block;"> FTZ 14B DIRECT DELIVERY PROGRAM 6/23/97  SIGNATURE </div>					

G.O. No. _____

CERTIFICATE OF BOND FOR TRANSPORTATION IN BOND AND/OR LADING FOR EXPORTATION FOR

2006 MEMPHIS, TENNESSEE

WITH THE EXCEPTIONS NOTED ABOVE, THE WITHIN-DESCRIBED GOODS WERE:

Delivered to the Carrier named above, for delivery to the District Director of Customs at destination sealed with Customs seals

Laden on the _____
(Vessel, vehicle, or aircraft)

which cleared for _____

on _____
(Date)

as verified by export records

(Inspector or warehouse officer)

(Date)

I truly declare that the statements contained herein are true and correct to the best of my knowledge and belief.

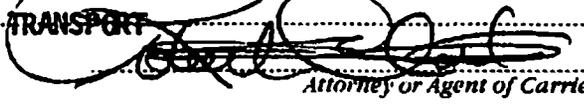
Entered or withdrawn by _____

CEDAR CHEMICAL CORPORATION
by **PHILBIN, CAZAVAS & ST. JOHN, INC. Atty in fact**

To the Inspector or Warehouse Officer: The above-described goods shall be disposed of as specified herein.

For the District Director of Customs.

Received from the District Director of Customs of above district the merchandise described in this manifest for transportation and delivery into the custody of the customs officers at the port named above, all packages in apparent good order except as noted hereon.

TRIPLE E TRANSPORT

Attorney or Agent of Carrier



RHONE-POULENC AGRO

14-20, RUE PIERRE BAIZET B.P 9163
69283 LYON CEDEX 09 - FRANCE
TEL. 04 72 85 25 25 - FAX 04 72 85 27 89
TLX 310 088 F RHONE
N° IDENTIFICATION TVA - FR 83 969 603 309

INVOICE N° 20115049 DATED 23.05.1997
DATE : 05.01.97

CONSIGNEE: U.S. CHEMICAL
U.S. CHEMICAL CORPORATION
ATTN: BOB CHRISTIAN
HWY 242 SOUTH
AR 72390 WEST HELENA
UNITED STATES

INVOICEE: U.S. CHEMICAL
U.S. CHEMICAL CORPORATION
ATTN: BOB CHRISTIAN
P.O. BOX 2749
AR 72390 WEST HELENA
UNITED STATES

U/REF : 01 4013746270010
Y/REF : 04057577
SHIPPING BY :
TERMS OF DELIVERY : F.T.I. - COST INS. FREIGHT
TERMS OF PAYMENT : 90 DAYS INVOICE DATE
PAYMENT DATE : 21.03.1997
PAYMENT MODE : TELEGRAPHIC TRANSFER
CURRENCY : USD

LOC : NEW ORLEANS

PRODUCT CODE : 105727011
CUST. MATERIAL NO : 3.4 POLY ETHER
QUANTITY : 1 000 000 LB
UNIT PRICE : 6.25 USD PER LB
AMOUNT : 6 250 000 USD

SH N° : 22291096

MARKING : RHONE-POULENC AGRO
U.S. CHEMICAL
CELEBR / USA
H.W.
G.W.
N.P.

TOTAL TO BE PAID :

6 250 000,00 USD

EXONERATION TVA ART. 263 ET 264 DU CODE GENERAL DES IMPOTS

TELEGRAPHIC TRANSFER OR SWIFT TO SOCIETE GENERALE LYON GRANDES
ENTREPRISES - ACCOUNT NUMBER 260107826
IBAN : FR 76 000 1000 0001 0001 0001 0001

[Signature]
RHONE-POULENC
14-20, RUE PIERRE BAIZET B.P. 9163
69283 LYON CEDEX 09
Tel 04 72 85 25 25 - Fax 04 72 85 27 89
S.A. Capital 1 431 615 000 F - R.C. LYON B 969 603 309

DEPARTMENT OF THE TREASURY
UNITED STATES CUSTOMS SERVICE

APPLICATION FOR
FOREIGN-TRADE ZONE ADMISSION
AND/OR STATUS DESIGNATION

19 CFR 146.22, 146.32, 146.35-146.37, 146.39-146.41, 146.44, 146.53, 146.66

CENSUS USE ONLY

1. ZONE NO. AND LOCATION (Address)
FOREIGN TRADE ZONE No. 2
NAPOLEON AVENUE WHARF
NEW ORLEANS, LA.

2. DISTRICT/PORT CODE
20 - 02 NEW ORLEANS, LA.

3. IMPORTING VESSEL (& FLAG)/OTHER CARRIER
(MX) M/V NUEVO LEON V.30W

4. EXPORT DATE
5/17/97

5. IMPORT DATE
6/7/97

6. ZONE ADMISSION NO.
23971

7. U.S. PORT OF UNLADING
NEW ORLEANS, LA.

8. FOREIGN PORT OF LADING
LE HAVRE

9. BILL OF LADING/AWB NO.
TEMULHNLN30W0628

10. INWARD M'FEST NO.
N/A

11. INBOND CARRIER
N/A

12. I.T. NO AND DATE
N/A

13. I.T. FROM (Port)
N/A

14. STATISTICAL INFORMATION FURNISHED DIRECTLY TO BUREAU OF CENSUS BY APPLICANT? YES NO

15. NO. OF PACKAGES AND COUNTRY OF ORIGIN	16. DESCRIPTION OF MERCHANDISE	17. HTSUS NO	18. QUANTITY (HTSUS)	19. GROSS WEIGHT	20. SEPARATE VALUE & AGGR CHGS.
7 C/O FR	(20') TANK CONTAINERS: 3,4-DICHLOROPHENYLISOCYANATE (3,4-DCPI) TOXIC LIQUID HAZARDOUS CARGO CLASS 6.1 UN 2250 P.G. II EMERGENCY TELEPHONE: (800) 424-9390	2929.10.3000	132200 KG	159760 KG	\$694,050.CI \$10,150.ND \$683,900.FO
21. HARBOR MAINTENANCE FEE (19 CFR 24.24) <input type="checkbox"/>					\$854.88

22. I hereby apply for admission of the above merchandise into the Foreign-Trade Zone. I declare to the best of my knowledge and belief that the above merchandise is not prohibited entry into the Foreign-Trade Zone within the meaning of section 3 of the Foreign-Trade Zones Act of 1934, as amended, and section 146.31, Customs Regulations.

23. I hereby apply for the status designation indicated:
 NONPRIVILEGED FOREIGN (19 CFR 146.42) PRIVILEGED FOREIGN (19 CFR 146.41) ZONE RESTRICTED (19 CFR 146.44) DOMESTIC (19 CFR 146.43)

24. APPLICANT FIRM NAME
CEDAR CHEMICAL CORPORATION

25. BY (Signature)
PHILBIN, CAZALAS & ST. JOHN INC. Atty in fact

26. TITLE

27. DATE
6/10/97

F.T.Z. AGREES TO RECEIVE MERCHANDISE INTO THE ZONE

28. FOR THE F.T.Z. OPERATOR (Signature)

29. TITLE

30. DATE
6/11/97

PERMIT Permission is hereby granted to transfer the above merchandise into the Zone.

31. DISTRICT DIRECTOR OF CUSTOMS: BY (Signature)

32. TITLE
INSP

33. DATE
6/11/97

PERMIT The above merchandise has been granted the requested status.

34. DISTRICT DIRECTOR OF CUSTOMS: BY (Signature)

35. TITLE
INSP

36. DATE
6/11/97

37. The goods described herein are authorized to be transferred: without exception except as noted below

PERMIT TO TRANSFER

38. CUSTOMS OFFICER AT STATION (Signature)
Thomas P. O'Connell

39. TITLE
GULF STATES CARTAGE

40. STATION
CHL #187

41. DATE
6/10/97

42. RECEIVED FOR TRANSFER TO ZONE (Driver's Signature)

43. CARTMAN

44. CHL NO.

45. DATE

46. To the District Director of Customs: The above merchandise was received at the Zone on the date shown except as noted below.
CORU 1970 79-6 FR2076 SIDE SIDE DENT

FTZ OPERATOR'S REPORT OF MERCHANDISE RECEIVED AT ZONE

47. FOR THE FTZ OPERATOR (Signature)

48. TITLE
W/RS SEP

49. DATE
6-13-97

TOLOCHIMIE

ADRESSER VOTRE CORRESPONDANCE A :

TOLOCHIMIE - Impasse PALAYRÉ
B P 1196 - 31037 TOULOUSE CEDEX 1
TÉL 05 61 31 78 78
TÉLÉCOPIE : 05 61 31 78 50

N / REF : MF /ML

DATE 16-Mai-97

CEDAR

COMMANDE N° 401 27462
EXPEDITION N° 438
DU 16 Mai 97

CAMION CITERNE N°
CONTAINER N° UTCU 457.005.4
WAGON N°

N° DE LOT DU PRODUIT B303A/16.5.97.5

N° DE LOT DU CONDITIONNEMENT
(s' il y a lieu)

CERTIFICAT D'ANALYSE DU 3,4-DICHLOROPHENYLISOCYANATE

Nous certifions que le produit ci-dessus a la composition suivante :

M E T H O D E	Détermination	Valeur	Unité	Spécification	Méthode d'analyse Tolochimie
1	aspect	conforme		solide blanc	Visuelle
2	3,4-dichlorophénylisocyanate	99.6	%	> 98.5	To 10.27.88
2	2,3-dichlorophénylisocyanate	0.23	%	pour information	To 10.27.88
2	3-chloro + 4-chlorophénylisocyanate	0	%	pour information	To 10.27.88
2	monochlorobenzène	0.01	%	< 0.2	To 10.27.88
2	semi-lourds	0.15	%	< 0.8	To 10.27.88
autre	0	0	%		To 10.27.88
autre			%		

principe de la méthode:

1	visuelle
2	C.P.G
autre	
autre	



LE RESPONSABLE DU CONTROLE ANALYTIQUE

	\$ 1.645 [#]	Drum - FOB - 30 Day
-	.04 [#]	180 - 30 Days TERMS
-	.05 [#]	Bulk Vs Drums
+	.06 [#]	150 LEASE + O.F.
+	.225 [#]	DUTY
	1.84	FOB - NOLA - Duty Pd - 30 NOLA NET INV.

CEDAR CHEMICAL CORPORATION

PURCHASE ORDER
No. 04-087455
 THIS NUMBER MUST APPEAR ON ALL INVOICES, PACKING SLIPS, PACKAGES & CORRESPONDENCE

Acknowledge and Invoice to:

CEDAR CHEMICAL CORPORATION
 P. O. BOX 2749
 WEST HELENA, AR 72390

DATE **9/09/97** PAGE **1**

REQUISITIONER **CHRISTIAN**

VENDOR

BAYER CORPORATION
 P. O. BOX 75662
 CHARLOTTE, NC

SHIP TO

CEDAR CHEMICAL CORPORATION
 HWY 242
 WEST HELENA, AR 72390

28275-5662

THIS OFFER TO PURCHASE IS MADE ONLY ON THE EXPRESS CONDITION THAT SELLER ACCEPTS ALL THE TERMS AND CONDITIONS ON THE REVERSE SIDE HEREOF AND ANY SUPPLEMENTAL CONDITIONS ATTACHED HERETO.

SHIP FROM		FOB		FREIGHT TERMS		PPDCOL	VENDOR NO
		DUTY PD-NOLA		BUYER			02987 - 04
SHIP VIA		Required Delivery Date		PAYMENT TERMS		TAX PERMIT NO	
		10/13/97		NET 30 DAYS / NOLA Arrival			
ITEM	QUANTITY	UNIT	INVENTORY NO	DESCRIPTION	GL ACCOUNT NO	UNIT PRICE	
	REG. NO. 14692 BY 20 1,200,000	LBS	CHRISTIAN	3,4 DCA	C 153 5910	1.64 LBS	
TO BE SHIPPED FROM GERMANY IN 150-TANKS 20 M/T EACH - TOTAL OF 28 TANKS. ARRIVAL NEW ORLEANS AS FOLLOWS: 2=W/O 10/17, 3=W/O 10/28, 4=W/O 11-10, 2=W/O 11/8, 2=W/O 11/20, 2=W/O 11/29, 3=W/O 12-6, 2=W/O 12/13, 2=W/O 12/20 3=W/O 12/29, 2=W/O 1/8, 2=W/O 1/10 CEDAR MUST PAY FOR RETURN OF MT TANK TO NOLA DEPOT.							
*** CONFIRMATION ***							

VENDOR COPY

BY Bob Christian
 AUTHORIZED SIGNATURE

COMMUNICATION RESULT REPORT

501 572 3785

CEDAR CHEMICAL CORP.

09-11-97 03:56PM

FILE	DATE & TIME	FILE TYPE	DELAYED	DESTINATION/TO:/FROM:	PAGE	REMARKS	SIZE
31	09-11 03:52PM	MEMORY-S		TO : CEDAR MEMPHIS	01		0023

NO.	PHONE / TTI NO.	COMM MODE	RESULT	NO.	PHONE / TTI NO.	COMM MODE	RESULT
001	001: CEDAR MEMPHIS		GOOD				

CEDAR CHEMICAL CORPORATION

Acknowledge and Invoice to:

**CEDAR CHEMICAL CORPORATION
P. O. BOX 2749
WEST HELENA, AR 72390**

DATE **9/09/97** PAGE **1**

REQUISITIONER **CHRISTIAN**

PURCHASE ORDER
No. 04-087455
 THIS NUMBER MUST APPEAR ON ALL INVOICES, PACKING SLIPS, PACKAGES, CORRESPONDENCE

3002FV

**BAYER CORPORATION
P. O. BOX 75662
CHARLOTTE, NC**

S-T-E-I-O

**CEDAR CHEMICAL CORPORATION
HWY 242
WEST HELENA, AR 72390**

28275-3662

THIS OFFER TO PURCHASE IS MADE ONLY ON THE EXPRESS CONDITION THAT SELLER ACCEPTS ALL THE TERMS AND CONDITIONS ON THE REVERSE SIDE HEREOF AND ANY SUPPLEMENTAL CONDITIONS ATTACHED HERETO

SHIP FROM		FOU		FREIGHT TERMS:		VENDOR NO	
SHIP VIA		DUTY PD-NOLA		BUYER		02987 - 04	
		Required Delivery Date		PAYMENT TERMS		TAX PERMIT NO.	
		10/13/97		NET 30 DAYS / NOLA Arrival			
ITEM	QUANTITY	UNIT	INVENTORY NO.	DESCRIPTION	G.I. ACCOUNT NO	UNIT PRICE	
REG. NO. 14692 20	1,200,000	BY LBS	CHRISTIAN	3,4 DCA	C 153 5910	1.64 LBS	
<p>TO BE SHIPPED FROM GERMANY IN 150-TANKS 20 M/T EACH - TOTAL OF 28 TANKS. ARRIVAL NEW ORLEANS AS FOLLOWS:</p> <p>2=W/O 10/13, 3=W/O 10/20, 3=W/O 10/27, 2=W/O 11/3, 2=W/O 11/10, 2=W/O 11/17, 3=W/O 11/24, 2=W/O 12/1, 2=W/O 12/8, 3=W/O 12/15, 2= W/O 12/22, 2=W/O 12/29</p> <p>CEDAR MUST PAY FOR RETURN OF MT TANK TO NOLA DEPOT.</p> <p style="text-align: center;">*** CONFIRMATION ***</p>							

Revision A

PURCHASE REQUISITION

No 14692

CEDAR CHEMICAL CORP.
WEST HELENA PLANT

DATE 9/5/97

REQUIRED DELIVERY DATE 10/13/97

PURCHASE ORDER NO. 04-087455

PURPOSE _____ ACCOUNT NO. COI-53-5910

ITEM	QUANTITY	UNIT	DESCRIPTION AND CODE	PRICE/UNIT
	1,200.000	#	3.4 DCA	1.84/#
To Be Shipped From Germany in				
150-TANKS 20 MIT EACH - TOTAL OF				
28 TANKS.				
ARRIVAL - NEW ORLEANS AS FOLLOWS				
2 = w/d 10/13				
3 = w/d 10/20				
3 = w/d 10/27				
2 = w/d 11/3				
2 = w/d 11/10				
2 = w/d 11/17				
3 = w/d 11/24				
2 = w/d 12/1				
2 = w/d 12/8				
3 = w/d 12/15				
2 = w/d 12/22				
2 = w/d 12/29				
CEDAR MUST PAY FOR RETURN OF MT TANK				
TO NOLA DEPOT.				

SUPPLIER
BAYER Corp

TERMS N30 - INVOICE

FOB Duty Pd - NOLA

FREIGHT FOR ACCOUNT OF
 BUYER SELLER

ISSUED BY _____

BCP

APPROVED BY _____

Andy 412-777-2512

SHIP VIA _____

PPD/COLLECT _____

FRT COI-53-5920



5100 Poplar Avenue • Suite 2414 • Memphis, TN 38137 • (901) 685-5348 • Fax (901) 684-5398

CEDAR INTERNAL CORRESPONDENCE

Date: August 26, 1997

To: Neil Robbins
~~555-0111-1111~~

From: Randal Tomblin
JRT-20-97

cc: C. McGee
J. Whitsitt
J. Hanna
E. White

Subject: DCA Purchases *JRT*

As we pick up steam on production for Riceco, we will be a net purchaser of DCA from Bayer.

In order to minimize cost to Riceco (freight and import duty) and to Cedar (for DCA shipped to Europe for diuron production on behalf of Cedar or Federssen), please establish necessary tracking procedures to:

- Ensure that the net cost of all DCA purchased or traded from any source is used to calculate the propanil transfer prices to Riceco.
- Ensure that the costs of DCPI and diuron are calculated using Cedar DCA cost regardless of the source of the DCA.
- Do not drum any DCA for shipment unless and until I have been consulted on the matter.

If you have any questions, please call.

Randal

AB000006235

COMMUNICATION RESULT REPORT

501 572 3795

CEDAR CHEMICAL CORP.

09-15-97 02:44PM

FILE	DATE & TIME	FILE TYPE	DELAYED	DESTINATION/TO:/FROM:	PAGE	REMARKS	SIZE
21	09-15 02:42PM	MEMORY-S		TO :14127774109	02		0040

NO.	PHONE / TTI NO.	COMM MODE	RESULT	NO.	PHONE / TTI NO.	COMM MODE	RESULT
001	14127774109		GOOD				

SEP 15 '97 12:50PM BAYER ORGANIC CHEM 412 777 4109

P.1/3



Telefax

Industrial Chemicals Division
Organic Chemistry

Date:	<u>9/15/97</u>	Pages:	<u>02</u>
From:	<u>Bob Christian</u>	To:	<u>Andy Vannatta</u>
Company:	<u>Cedar Chemical</u>	Company:	<u>Organic Chemicals</u>
Fax:	<u>870-572-3795</u>	Fax:	<u>(412) 777-4109</u>
Phone:	<u>870-572-3701 X 227</u>	Phone:	<u>(412) 777-2512</u>

Re: 3.4 DCA.

Attached is a questionnaire sent to us by Bayer AG in Germany.

Please arrange to have this filled out & returned to me as soon as possible.

Thanks

Andy



Telefax

Industrial Chemicals Division
Organic Chemicals

Date:	<u>9/15/97</u>	Pages:	<u>2</u>
From:	<u>Bob Christian</u>	To:	<u>Andy Yannatta</u>
Company:	<u>Cedar Chemical</u>	Company:	<u>Organic Chemicals</u>
Fax:	<u>870-572-3795</u>	Fax:	<u>(412) 777-4109</u>
Phone:	<u>870-572-3701 X 227</u>	Phone:	<u>(412) 777-2512</u>

Re: 3.4 DCA.

Attached is a questionnaire sent to us by Bayer AG in Germany.

Please arrange to have this filled out & returned to me as soon as possible.

Thanks

Andy.

Also attached is a copy of a letter sent to Randall Tomblin on this product for your info & file.

NOTICE OF CONFIDENTIALITY

The information contained in and transmitted with this facsimile is confidential and/or exempt from disclosure under applicable law. It is intended only for the individual or entity named above. You are hereby notified that any dissemination, distribution, copying, or use of or reliance upon the information contained in and transmitted with this facsimile by or to anyone other than the recipient designated above by the sender is UNAUTHORIZED and STRICTLY PROHIBITED. If you have received this facsimile in error, please immediately call Bayer Corp. collect at (412) 777-2512 so that we can arrange for the return of the original facsimile at our cost. Thank you.

Requirements - Discharge of Tankcontainers -

Please, return to: MD-ZL/Overseas-Traffic Department
 Leverkusen, Geb. B181, R305
 Attn. Mr. Kunz / Mr. Simon
 Phone: 49/214-30-27795 or 88188; Fax: 49/214-30-61999

General Information:

product: 3,4 Dichloro Anilin article no.:
 plant of discharge: WEST HELENA plant manager: Bob CHRISTIAN
ARR - 72390 phone: 501-572-3791 - x 227

Questions:

- Have you ever discharged tankcontainers with this product? yes no
- product-temperature / discharge: approx. from 80 up to 85 °C.
- time of discharge, technical: approx. from 1 up to 2 hours.
- office hours: Monday to Friday Saturday Sunday, public holiday
 time: 8 AM until 5 PM

- How can the tankcontainer be discharged?
 - air valve (top) connective-diameter: 3/4"
 thread:
 coupling: Chicago
 - bottom outlet connective-diameter: 2"
 thread:
 coupling: XX
 - vapor recovery line connective-diameter:
 thread:
 coupling:

- syphon pipe required? yes no
- heating? steam electrical
- special equipment or procedures required?

GESAMT R. 41

GESAMT SEITEN 02



Industrial Chemicals Division

Organic Chemicals

Bayer Corporation
100 Bayer Road
Pittsburgh, PA 15205-0741
Phone: 412 777-2000

September 5, 1997

Mr. Randall Tomblin
CEDAR CHEMICAL
5100 Poplar Avenue
Suite 2414
Memphis, TX 38137

RE: 3,4-Dichloroaniline

Dear Randy:

We refer to your purchase order #04087455 for 540mt of 3,4-Dichloroaniline. We have informed Bayer AG accordingly, and based on undisturbed production, they plan to ship the material as per the schedule given to us by Mr. Bob Christian.

We have some good news; namely, we have been able to achieve one way containers and therefore the price that we will invoice you for these 540mt in isocontainers would be 5 cents/lb less than what we had previously indicated. The new price would be \$1.84/lb ex dock, New Orleans, duty paid. Please note that the terms of payment are 30-days net from the date of invoice. Also, regarding these isocontainers, the total number of allowable days for unloading and return of these containers are 10 days from the date of vessel arrival. There would be a \$35 per day demurrage charge beyond the total 10 days period which, of course, would have to be born by you.

If you have any questions, please give me a call. Thank you.

Very truly yours,

A handwritten signature in black ink, appearing to read "Shewak Hingorani", is written over a horizontal line.

Shewak Hingorani
cc: Mr. D. Petersen
CMC, AV
SHEHMA/RT

Bayer - DCA

Load 1

	Date	Inv #	Drms	Net	Lbs	US\$	Per # Price
DCA Purchase	8/26/97	3033154	78	551	42,978	70,698.81	1.645
DCA Purchase	8/26/97	3033169	78	551	42,978	70,698.81	1.645
Ocean Freight							0.000
Ocean Freight							0.000
Duty	10/22/97	41000 Gilscot				1,885.00	0.044
Duty							0.000
Inland Freight	9/3/97	64778 Inter Sea Port Service				3,523.19	0.082
Total Cost delivered to Drexal						146,805.81	3.416

Accounting:		\$ Dollars	Unit Cst
C153-5910		141,397.62	
C153-5920		5,408.19	
Total	85,956	146,805.81	1.708

03.03.97

13:41

INTER SEA-PORT SERVICE

0048878898

F-02

15028

inter sea port service

Spezialtransportgesellschaft mbH

inter sea port service GmbH, Postfach 120341, 2600 Bremerhaven

GILSCOT-GUIDROZ INTERNATIONAL
Attn. Keith Guidroz
2815 Division Street, Suite 202

METAIRIE, LA 70002 USA

Fax 001 504 887 8898

Neue Postleitzahl:

Postfach 12 03 41

27617 Bremerhaven

2600 Bremerhaven-Kaiserhafen

Postfach 120341, Franziskanstr. 84

Telefon (0471) 412043

Telefax (0471) 412545

Telex 228720

USA-Int. 0014700000

Bankverbindungen:

Geestemünder Bank AG, Bremerhaven

(BLZ 0020063)

DM Kto. 4730001

US Kto. 1-2000000

Bremer Bank, Bremerhaven

(BLZ 2620011) Kto. 487047000

Rechnung/Invoice No.: 198064 778

Datum: 3. sept.

156 Drums with Dichloroanilines Solid Toxic 0,1 each 600 lbs gross from Bayer, Leverkusen/Germany loaded 28.29. Aug. 97 to E.M.V. North Hungarian Chemical Works, H. 3792 Sajobahony/Hungary etc 1.sept. and 3. Sept. 97

ex free loaded on our two Trucks at Bayer, Leverkusen, and transport in Bond to E.M.V. North Hungarian, Sajobahony/Hungary as estimated per Truck DM 2960,-

ENTERED

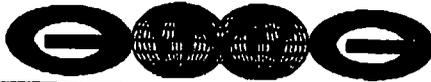
OCT 3 1 1997

WEST HELENA

DM 5960,00

VENDOR #		INVOICE #	
15250		064 778	
I.O #	REC RPT #	INV CD	INV. DATE
		1	090397
TERMS CODE	DUE DATE	FRT. BILL CD	SALES ORDER #
N			
INVOICE AMT.		DISC. ALLOWED	
3260.00 3523.19			
GL NUMBER	AMOUNT	WORK ORDER #	
01535920	3260.00 3523.19	5	
		28	
COPIED BY	DATE	APPROVED BY	ENTERED BY
KK	10 20 97	gllw	

AB000079534



ILSCOT - GUIDROZ INTERNATIONAL

FMC NO 4054

MEMBER OF NATIONAL BROKERS & FORWARDERS
ASSOCIATION OF AMERICA

2815 DIVISION STREET
SUITE 202
METAIRIE, LA 70002 USA
PHONE (504) 887-8897
FAX (504) 887-8898

TO: CEDAR CHEMICAL CORP.
HIGHWAY 242 SOUTH

WEST HELENA, AR 72390

ATTN: ACTS RECEIVABLE

INVOICE # 41000

OUR REFERENCE	DATE	YOUR REFERENCE		
41000	10/22/97	BAYER CORPORATION PITTSBURGH PA.		
CARRIER	ON BOARD DATE	PORT OF LOADING	PORT OF DISCHARGE	ETA
"NEDLOYD HOLLAND"	/ /	ROTTERDAM	NOLA	10/12/97
BILL OF LADING NO:		COMMODITY:		
		2X20 FT ISOTANKS FROM ROTTERDAM		

TO NOLA 3,4DICHLOROANILINE

ENCLOSURES	ORIG.	COPY	DESCRIPTION OF CHARGES	AMOUNT
BILLS OF LADING			AIR/OCEAN FREIGHT	
INS. CERTIFICATE			INLAND FREIGHT	
CONSULAR INVOICE			DRAYAGE/PORT SERVICES	
COMMERCIAL INVOICE			INSURANCE	
			CONSULAR FEES	
			DOCUMENT EXPRESS	
			OTHER	

ENTERED
OCT 31 1997
WEST HELLENA

VENDOR #		INVOICE #	
12347		41000	
P.O. #	REC. RPT. #	INV. CD	INV. DATE
		1	102297
TERMS CODE	DUE DATE	FRT. BILL CD	SALES ORDER #
N			
INVOICE AMT.	DISC ALLOWED		
1885.00			
GL NUMBER	AMOUNT	WORK ORDER #	
01535920	1885.00		
DATE	APPROVED BY	ENTERED BY	
10-28-97	[Signature]	[Signature]	

930.00
930.00
25.00

DCA
OF
BC
CO-53-5920
\$ 1885.00

VE YOU.
SEND AND A TRUE COPY OF EACH PERTINENT DOCUMENT
T OF ANY REBATE DIRECTLY, OR INDIRECTLY.



REMIT TO:
 BAYER CORPORATION
 P.O. BOX 75662
 CHARLOTTE, NC 28275-5662

FIBERS ORGANICS AND RUBBER DIV
 100 BAYER ROAD
 PITTSBURGH, PA. 15205

INVOICE/ORDER ACKNOWLEDGEMENT NO: 3033154 DATE: 08-26-97 CO-21 DIV-10 DP-0012
 BILL TO: 005761-001 EXPORT SHIP TO: 037539-001-009404

CEDAR CHEMICAL CORP
 P.O. BOX 2749
 W HELENA AR 72390

CEDAR CHEMICAL CORP
 C/O INTERSEAPORT SERVICE
 BREMERHAVEN
 GERMANY 61

RECEIVED
 SEP 09 1997

INVOICE

PLEASE RETURN THE "DUPLICATE INVOICE" COPY WITH
 REMITTANCE TO INSURE PROPER PAYMENT IS APPLIED TO YOUR
 ACCOUNT.

PURCHASE ORDER #: 04-077214
 FOB: LEVERKUSEN,

ORDER INVOICE NO: 3033154 DATE: 08-26-97
 FREIGHT: COLLECT DATE SHIPPED: 08-26-97

ITEM	CODES	DESCRIPTION	QUANTITY	UNIT PRICE	AMOUNT
01	N826	3,4-DICHLOROANILINE, PURE	42,978.00	1.64500	70,698.81
080081	06Y63448	78 X	551.00 LB	DRUM (1751)	

SPECIAL PRICING APPLIES

06Y63448

VENDOR #		INVOICE #	
2987		3033154	
P.O. #	REC. RPT. #	INV. CD	INV. DATE
77214		1	082697
TERMS CODE	DUE DATE	FRT. BILL CD.	SALES ORDER #
3			
INVOICE AMT.		DISC. ALLOWED	
70,698.81			
GL NUMBER		AMOUNT	WORK ORDER #
C 153 5910		70,698.81	
DONE BY		DATE	APPROVED BY
RK		9-23-97	[Signature]
		ENTERED BY	

4
 7E 70,698.81

ck nr

 LAST PAGE
 CORPORATION **0099
 IN YOUR PURCHASE ORDER, YOUR ORDER IS ACCEPTED
 IF SUCH CONTRACT EXISTS, YOUR ORDER IS ACCEPTED
 TERMS AND CONDITIONS PRINTED ON THE REVERSE SIDE

REMIT TO:
BAYER CORPORATION
P.O. BOX 75662
CHARLOTTE, NC 28275-5662

FIBERS ORGANICS AND RUBBER DIV
100 BAYER ROAD
PITTSBURGH, PA. 15205

INVOICE/ORDER ACKNOWLEDGEMENT NO: 3033169 DATE: 08-26-97 CO-21 DIV-10 DP-0012
BILL TO: 005761-001 EXPORT SHIP TO: 037539-001-009404

CEDAR CHEMICAL CORP
P.O. BOX 2749
W HELENA AR 72390

CEDAR CHEMICAL CORP
C/O INTERSEAPORT SERVICE
BREMERHAVEN
GERMANY 61

INVOICE

PLEASE RETURN THE "DUPLICATE INVOICE" COPY WITH REMITTANCE TO INSURE PROPER PAYMENT IS APPLIED TO YOUR ACCOUNT

PURCHASE ORDER #: 04-077214
FOB: LEVERKUSEN,

ORDER INVOICE NO: 3033169 DATE: 08-26-97
FREIGHT: COLLECT DATE SHIPPED: 08-26-97

ITEM	CODES	DESCRIPTION	QUANTITY	UNIT PRICE	AMOUNT
01	N826	3,4-DICHLOROANILINE, PURE	42,978.00	1.64500	70,698.81
080081	06Y63449	78 X 551.00 LB DRUM (1751)			

SPECIAL PRICING APPLIES

06Y63449

ITEM CODE TERMS AND CONDITIONS FOR EACH ITEM

VENDOR #		INVOICE #	
2987		3033169	
P.O. #	REC. RPT. #	INV. CO	INV. DATE
77214		1	082697
TERMS CODE	DUE DATE	FRT BILL CO	SALES ORDER #
3			
INVOICE AMT.		DISC ALLOWED	
70,698.81			
GL NUMBER		AMOUNT	WORK ORDER #
C 153	5910	70,698.81	
DONE BY	DATE	APPROVED BY	ENTERED BY
SV	08-26-97		

70,698.81

DR
JK

LAST PAGE
ORPORATION

****0100**

IN YOUR PURCHASE ORDER, YOUR ORDER IS ACCEPTED
 IF SUCH CONTRACT EXISTS, YOUR ORDER IS ACCEPTED
 TERMS AND CONDITIONS PRINTED ON THE REVERSE SIDE



Telefax
**Industrial Chemicals Division
Organic Chemicals**

Date:	<u>10/14/97</u>	Pages:	<u>5</u>
To:	<u>Bob Christian</u>	From:	<u>Andy Vannatta</u>
Company:	<u>Cedar Chemical</u>	Company:	<u>Organic Chemicals</u>
Fax:	<u>870-572-3795</u>	Fax:	<u>(412) 777-4109</u>
Phone:	<u>870-572-3701 X227</u>	Phone:	<u>(412) 777-2512</u>

Re: 3.4 DCA.

Attached is a copy of our brokers instructions covering two containers of 3.4 DCA expected to arrive in New Orleans on 10/17.

Please note that we have not assigned carrier. We need to discuss this item.

We are also attaching the analysis for each of these shipments.

Our reference nos 06y 63627 + 63628

NOTICE OF CONFIDENTIALITY

The information contained in and transmitted with this facsimile is confidential and/or exempt from disclosure under applicable law. It is intended only for the individual or entity named above. You are hereby notified that any dissemination, distribution, copying, or use of or reliance upon the information contained in and transmitted with this facsimile by or to anyone other than the recipient designated above by the sender is UNAUTHORIZED and STRICTLY PROHIBITED. If you have received this facsimile in error, please immediately call Bayer Corp. collect at (412) 777-2512 so that we can arrange for the return of the original facsimile at our cost. Thank you.



FRITZ COMPANIES, INC.
101 DELTA DRIVE/SUITE 8
ST. ROSE, LA 70087
FAX: 504-466-4322

Bayer Corporation
100 Bayer Road
Pittsburgh, PA 15203-0741
Phone: 412 777-2000

SEPTEMBER 30, 1997

BAYER ORDER # : SEE ATTACHED
CUSTOMER : CEDAR CHEMICAL CORP
CUSTOMER PO : SEE ATTACHED
VESSEL : NL HOLLAND
BL # : STOLT SNN971842
CONTAINER # : SEE ATTACHED
NET WGT : SEE ATTACHED
PORT OF LOADING : ROTTERDAM
PORT OF ARRIVAL : NEW ORLEANS

ARRIVAL DATE : 10/17/97

09/26/97

ENCLOSED, PLEASE FIND DOCUMENTS PERTAINING TO THE FOLLOWING.

SEE ATTACHED

MAKE I.D. ENTRY IN THE NAME OF BAYER CORPORATION (IMPORTER'S # 25-1339219B0)

TRANSACTION BETWEEN RELATED PARTIES

ENTER WITH U. S. CUSTOMS AS :

H.S. # : SEE ATTACHED
RATE : SEE ATTACHED
CAS # : SEE ATTACHED

PLEASE ISSUE DELIVERY ORDER(S) TO :

CARRIER TO BE ADVISED

SHIP ON A COLLECT BASIS TO :

CEDAR CHEMICAL CORP
HIGHWAY 242
WEST HELENA, AR 72390

INLAND BILL OF LADING ATTACHED

SPECIAL INSTRUCTIONS :

NOTE ON DELIVERY ORDER: CARRIER TO CALL FOR DELIVERY APPOINTMENT
BROKER TO SUPPLY CARRIER WITH ATTACHED MSDS AND BULK TAGS. CUSTOMER
REQUESTED CARRIER IS TRIPLE E TRANSPORT.

CC: CEDAR CHEMICAL CORP
XX, LOC, AV, JB

---ATTACHMENTS---

JENNIFER HOLUB (JH)
412-777-2158



CUSTOMER : CEDAR CHEMICAL CORP
SNI1021035-1
10/17/97
CUSTOMER PO:

NL HOLLAND
STOLT SNN971842
NET: 19040.00 KG

Bayer Corporation
100 Bayer Road
Pittsburgh, PA 15205-9741
Phone: 412 777-2000

BAYER PO# : 06Y63628 PRODUCT : N826 CONT CD : 99 NWGT : 19040.00 KG

1 TANK CONTAINER(S) OF 3,4 DICHLOROANILINE, PURE

41,975 lbs

H.S. # : 2921.42.2300
RATE : 1.70¢ / KG + 15.10 %
CAS # : NOT REQUIRED
POSITIVE TSCA CERTIFICATION REQUIRED

CUSTOMER : CEDAR CHEMICAL CORP
SNI1211063-9
10/17/97
CUSTOMER PO: 04-087455

NL HOLLAND
STOLT SNN971842
NET: 19180.00 KG

BAYER PO# : 06Y63627 PRODUCT : N826 CONT CD : 99 NWGT : 19180.00 KG

1 TANK CONTAINER(S) OF 3,4 DICHLOROANILINE, PURE

42,284 lbs

H.S. # : 2921.42.2300
RATE : 1.70¢ / KG + 15.10 %
CAS # : NOT REQUIRED
POSITIVE TSCA CERTIFICATION REQUIRED



BAYER AG
ZF ZENTRALE ANALYTIK
WERK LEVERKUSEN

CERTIFICATE OF ANALYSIS

061/062
PAGE 1 END
DATE 02.10.97

BAYER CORPORATION

ATTN. A. VANMATA
100 BAYER ROAD
PITTSBURGH PA 15205-9741
USA

SNIU 121063-9

ARTICLE: 3,4-DICHLOROANILINE LIQUID MOL 162.0
ART-NO.: 02 00734156

04-087455

SAMPLE-NO. | BATCH-NO. | WORK-ORDER-NO. | PURCHASE-ORDER-NO. | QUANTITY (KG)
410603-0 | 080249717 | 0080249717 | (SEE MARKS) | 19100

DATE OF RELEASE: 23.09.97

SAMPLE WAS TAKEN ACC. TO COMPANY STAND. AND TESTED WITH THE FOLLOWING RESULT:

TEST	RESULT	UNIT	REQUIREMENT	
			MIN	MAX
APPEARANCE	COMPLIES		MUST COMPLY	
ASSAY (GAS CHROMATOGRAPHY)	99.7	%	99	
WATER (K. FISCHER)	0.02	%		0.1
3,4,3',4'-TETRACHLOROAROBENZENE	<2	MG/KG		50

MARKS:

BAYER
04-087455
NEW ORLEANS
06Y63627 N826
3,4 DICHLOROANILINE, PURE
GROSS 22340 KG
NET 19100 KG

Dr. Stierdt
DR. STIERDT

RAW MATERIAL RECEIVING RECORD

No 10793

CEDAR CHEMICAL 9000-1 REV: C

TIME IN AT GATE
1516

RECEIVED BY
J. Williams

SECTION 1

DATE	ORDER NO.	CAR OR TRUCK NO.	DESIRED WEIGHT
<i>10-18-97</i>	<i>04-087456</i>	<i>S. N. U. 1210639</i>	Net <i>38.280</i>

SHIPPER	CARRIER
<i>Bayco Corporation</i>	<i>T. J. King & Co.</i>

QUANTITY	CONTAINER	DESTINATION	RAW MAT CODE #	DESCRIPTION
<i>1</i>	<i>2/C</i>	<i>unit 6</i>	<i>3020</i>	<i>DCA</i>

COMMENTS
/

SECTION 2

RECIPIENT	TIME SAMPLE/CERTIFICATE TAKEN TO LAB

UNLOADED AT (tank number, unit, warehouse, etc.)

COMMENTS

SECTION 3

LAB TECHNICIAN	ACCEPT	REJECT	REASON FOR REJECTION
<i>P. F.</i>	<i>✓</i>		

COMMENTS
COA 99.7% P. 0.03 H₂O

SECTION 4

SHIP SUPERVISOR	ACCEPT	REJECT	REASON FOR REJECTION
<i>J. J. ...</i>	<i>✓</i>		

PLANT WEIGHT	UNLOADING TIMES	
NET	START TIME	END TIME

COMMENTS
Drops containers to be off loaded later

RAW MATERIAL RECEIVING RECORD

No. **10793**

CEDAR CHEMICAL 9000-1 REV: C

TIME IN AT GATE
1516

RECEIVED BY
J. Williams

SECTION 1

DATE	ORDER NO.	CAR OR TRUCK NO.	DECLARED WEIGHT
10-18-97	24-007456	NIU 131063	Net 35 280

SHIPPER	CARRIER
<i>Bayer Corporation</i>	<i>Trans E</i> 42284

QUANTITY	CONTAINER	DESTINATION	RAW MAT CODE #	DESCRIPTION
1	S/C	with 6	3030	DCA

COMMENTS
/

SECTION 2

TIME SAMPLES/COPIES TAKEN TO LAB

--	--

UNLOADED AT (tank number, unit, warehouse, etc.)

COMMENTS

SECTION 3

REASON FOR REJECTION	REASON FOR REJECTION	REASON FOR REJECTION	REASON FOR REJECTION
P F	V		

COMMENTS
COA 77.7% H₂O; .03 H₂O

SECTION 4

<i>J. Jones</i>			
-----------------	--	--	--

PLANT WEIGHT	UNLOADING TIMES	
NET	START TIME	END TIME

COMMENTS
Prope container to be off loaded later

RAW MATERIAL RECEIVING RECORD

No 10792

CEDAR CHEMICAL 9000-1 REV: C

TIME IN AT GATE
0630

RECEIVED BY
DW

SECTION 1

DATE: 10/12/97 ORDER NO: 04-087455 CAT OF TRUCKING: SMTU 1210351 REQUIRED WEIGHT: Net 15120KG

SHIPPER: Bayer CARRIER: Triple E 41976

QUANTITY	CONTAINER	DESTINATION	RAW MAT CODE #	DESCRIPTION
1	S/C	unit 6	3020	OCA

COMMENTS
C of A was faxed

SECTION 2

EQUIPMENT: Manual TIME SAMPLE CERTIFICATE TAKEN TO DATE: 6:55

UNLOADED AT (tank number, unit, warehouse, etc.)
dump unit 6 T611P

COMMENTS
checked unit for 12/12

SECTION 3

TLP X

COMMENTS

SECTION 4

9760 X

PLANT WEIGHT: NET UNLOADING TIMES: START TIME: END TIME

COMMENTS



Industrial Chemicals Division

Organic Chemicals

Bayer Corporation
100 Bayer Road
Pittsburgh, PA 15205-9741
Phone: 412 777-2000

September 5, 1997

Mr. Randall Tomblin
CEDAR CHEMICAL
5100 Poplar Avenue
Suite 2414
Memphis, TX 38137*Bob Christian
Neil Robben***RE: 3,4-Dichloroaniline**

Dear Randy:

We refer to your purchase order #04087455 for 540mt of 3,4-Dichloroaniline. We have informed Bayer AG accordingly, and based on undisturbed production, they plan to ship the material as per the schedule given to us by Mr. Bob Christian.

We have some good news; namely, we have been able to achieve one way containers and therefore the price that we will invoice you for these 540mt in isocontainers would be 5 cents/lb less than what we had previously indicated. The new price would be \$1.84/lb ex dock, New Orleans, duty paid. Please note that the terms of payment are 30-days net from the date of invoice. Also, regarding these isocontainers, the total number of allowable days for unloading and return of these containers are 10 days from the date of vessel arrival. There would be a \$35 per day demurrage charge beyond the total 10 days period which, of course, would have to be born by you.

If you have any questions, please give me a call. Thank you.

Very truly yours,

A handwritten signature in black ink, appearing to read "Shewak Hingorani", written over a horizontal line.

Shewak Hingorani
cc - Mr. D. Petersen
CMC, AV
SHH134/RT



WESTRADE USA INC.
 10350 Westheimer Rd. Ste 230 • HOUSTON, Texas 77042
 Phone: (713) 765-0063 Telex: 796110 Post: (713) 977-3727

COMMERCIAL INVOICE
NO 00719

DATE: 31-Jul-96
 TERMS OF SALE: UPON RECEIPT

CEDAR CHEMICAL
 HWY 242 SOUTH WEST
 HELENA, ARKANSAS 72380
 U.S.A.
 ATT: BOB CHRISTIAN

RECEIVED

AUG 18 1997

MARKS

DCA
 6 X 40'

INVOICE No.	SHIPPED VIA	TOTAL GROSS TOTAL NTS	YOUR ORDER No.	YOUR REQ. No.		
	BY SEA	551.15 LB EA				
ITEM No	QTY ORDERED	QTY BACK ORDER	QTY SHIPPED	DESCRIPTION	UNIT PRICE	TOTAL
				FREIGHT CHARGES ON 6 X 40' CONTAINERS WITH 80 DRUMS EA OF DCA TOTAL: 284552 LB		
TERMS: UPON RECEIPT						
INLAND FREIGHT FROM TECUN UMAN EMALA ELENA, AR.					\$ 5,080.00	
					\$ 11,411.07	
					\$ 16,491.07	

gas for DCA they board us last storm

JK HLT 7/28/97

VENDOR #		INVOICE #	
32516		719	
PO #	REC. RPT #	INV. CO	INV. DATE
			073196
TERMS CODE	DUE DATE	FRT BILL CO	SALES ORDER #
A			
INVOICE AMT.	DISC. ALLOWED		
16,441.07			
GL NUMBER	AMOUNT	WORK ORDER #	
C153 5930	16,441.07		
DATE	APPROVED BY	ENTERED BY	
8-6-97	[Signature]	[Signature]	

ESTINATION USA
 ARTICULARES CONSIGNADOS EN LA CARA DESTINATARIA POR CUALQUIER ERA CONSTATARSE EN LOS DATOS

RAW MATERIAL RECEIVING RECORD

№ 10792

CEDAR CHEMICAL 9000-1 REV: C

TIME IN AT GATE
0630

RECEIVED BY
DLW

SECTION 1

DATE ORDER NO. CAR OF TRUCK NO. DECLARED WEIGHT

10/18/97 04-087455 SNIU 1210351 Net 1980KG

SHIPPER
Bayer

CARRIER
Triple E

QUANTITY	CONTAINER	DESTINATION	RAW MAT CODE #	DESCRIPTION
1	S/C	unit 6	3020	OCA

COMMENTS
C of A was faxed

SECTION 2

RECIPIENT TIME SAMPLE/CERTIFICATE TAKEN TO LAB

MW 6:55

UNLOADED AT (tank number, unit, warehouse, etc.)
unit 6 T6119

COMMENTS
dipped unit for raw

SECTION 3

BY TECHNICIAN ACCEPT REJECT REASON FOR REJECTION

TLP X

COMMENTS

SECTION 4

SHIFT SUPERVISOR ACCEPT REJECT REASON FOR REJECTION

97 Real X

PLANT WEIGHT UNLOADING TIMES
NET START TIME END TIME

COMMENTS



Telefax
**Industrial Chemicals Division
Organic Chemicals**

Date:	<u>10/14/97</u>	Pages:	<u>5</u>
To:	<u>Bob Christina</u>	From:	<u>Andy Vannatta</u>
Company:	<u>Cedar Chemical</u>	Company:	<u>Organic Chemicals</u>
Fax:	<u>870-572-3795</u>	Fax:	<u>(412) 777-4109</u>
Phone:	<u>870-572-3701 X227</u>	Phone:	<u>(412) 777-2512</u>

Re: 3.4 DCA.

Attached are a copy of our Brokers
Instructions & the Analysis covering
two more containers of 3.4 DCA expected
to arrive in New Orleans on 10/23.

Our reference nos 06763629 & 63630

NOTICE OF CONFIDENTIALITY

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FRITZ COMPANIES, INC.
101 DELTA DRIVE/SUITE 5
ST. ROSE, LA 70087
FAX: 504-466-4322

Bayer Corporation
100 Bayer Road
Pittsburgh, PA 15205-8741
Phone: 412 777-2000

OCTOBER 09, 1997

BAYER ORDER # : SEE ATTACHED
CUSTOMER : CEDAR CHEMICAL CORP
CUSTOMER PO : SEE ATTACHED
VESSEL : SL QUALITY
BL # : STOLT SNN971899
CONTAINER # : SEE ATTACHED
NET WGT : SEE ATTACHED
PORT OF LOADING : ROTTERDAM
PORT OF ARRIVAL : NEW ORLEANS

ARRIVAL DATE : 10/23/97

10/02/97

ENCLOSED, PLEASE FIND DOCUMENTS PERTAINING TO THE FOLLOWING.

SEE ATTACHED

MAKE I.D. ENTRY IN THE NAME OF BAYER CORPORATION (IMPORTER'S # 25-1339219BU)

TRANSACTION BETWEEN RELATED PARTIES

ENTER WITH U. S. CUSTOMS AS :
H.S. # : SEE ATTACHED
RATE : SEE ATTACHED
CAS # : SEE ATTACHED

PLEASE ISSUE DELIVERY ORDER(S) TO : CARRIER TO BE ADVISED

SHIP ON A COLLECT BASIS TO :
CEDAR CHEMICAL CORP
HIGHWAY 242
WEST HELENA, AR 72390

INLAND BILL OF LADING ATTACHED

SPECIAL INSTRUCTIONS :
NOTE ON DELIVERY ORDER: CARRIER TO CALL FOR DELIVERY APPOINTMENT
BROKER TO SUPPLY CARRIER WITH ATTACHED MSDS AND BULK TAGS. CUSTOMER
REQUESTS TRIPLE E TRANSPORT AS CARRIER.

CC: CEDAR CHEMICAL CORP
XX, LOG AV, JB

JENNIFER HOLUB (JH)
412-777-2158

---ATTACHMENTS---



CUSTOMER : CEDAR CHEMICAL CORP
SNIU121338-7
10/23/97
CUSTOMER PO:

SL QUALITY
STOLF SNN971899
NET: 19640.00 KG

Bayer Corporation
100 Bayer Road
Pittsburgh, PA 15205-0741
Phone: 412 777-2000

BAYER PO# : 06Y63629 PRODUCT : N826 CONF CD : 99 NWGT : 19640.00 KG

1 TANK CONTAINER(S) OF 3,4 DICHLOROANILINE, PURE

43,298 lbs

H.S. # : 2921.42.2300
RATE : 1.70¢ / KG + 15.10 %
CAS # : NOT REQUIRED
POSITIVE TSCA CERTIFICATION REQUIRED

CUSTOMER : CEDAR CHEMICAL CORP
SNIU121340-6
10/23/97
CUSTOMER PO:

SL QUALITY
STOLF SNN971899
NET: 19040.00 KG

BAYER PO# : 06Y63630 PRODUCT : N826 CONF CD : 99 NWGT : 19040.00 KG

1 TANK CONTAINER(S) OF 3,4 DICHLOROANILINE, PURE

41,975 lbs

H.S. # : 2921.42.2300
RATE : 1.70¢ / KG + 15.10 %
CAS # : NOT REQUIRED
POSITIVE TSCA CERTIFICATION REQUIRED



BAYER AG
ZF ZENTRALE ANALYTIK
WERK LEVERKUSEN

CERTIFICATE OF ANALYSIS

061/062
PAGE 1 HED
DATE 02.10.97

BAYER CORPORATION

ATTN: A. VANMATTIA
100 BAYER ROAD
PITTSBURGH PA 15205-9741
USA

SNIU 121340-6

ARTICLE: 3,4-DICHLOROANILINE LIQUID MOL 162,0
ART-NO.: 02 00734156

04-087455

SAMPLE-NO. | BATCH-NO. | WORK-ORDER-NO. | PURCHASE-ORDER-NO. | QUANTITY (KG)
410673-0 | 0802512F7 | 00802512F7 | (SEE MARKS) | 19040

DATE OF RELEASE: 01.10.97

SAMPLE WAS TAKEN ACC. TO COMPANY STAND. AND TESTED WITH THE FOLLOWING RESULT:

TEST	RESULT	UNIT	REQUIREMENT	
			MIN	MAX
APPEARANCE	COMPLIES		MOST COMPLY	
ASSAY (GAS CHROMATOGRAPHY)	99.8	%	99	
WATER (K. FISCHER)	0.05	%	0.1	
3,4,3',4'-TETRACHLOROANILINE	1	MG/KG	50	

MARKS:

BAYER
04-087455
NEW ORLEANS
06Y63630 NB26
3,4 DICHLOROANILINE, PURE
GROSS 23140 KG
NET 19040 KG
MADE IN GERMANY
NB26 01/11/96

CONTAINER-NO.:
SNTU121340-6

[Signature]
DR. SIEMERDT

RAW MATERIAL RECEIVING RECORD

No. 11478

CEDAR CHEMICAL 9000-1 REV: C

TIME IN AT GATE
0745

RECEIVED BY
M. Sullivan

SECTION 1

DATE	ORDER NO.	CARRIER/TRUCKING NO.	DECLARED WEIGHT
11-4-97	<i>7141</i>	<i>SAW 121338-7</i>	Net <i>714 43,298</i>

SHIPPER	CARRIER
<i>Gilbert-Hudson/Rays Corp.</i>	<i>Highland E</i>

QUANTITY	CONTAINER	DESTINATION	RAW MAT CODE #	DESCRIPTION
1	S/C	Unit #2	3020	DCA

COMMENTS
Lab Has C.O.A.

SECTION 2

RECEIVED AT	TIME
<i>Unit #1</i>	8:30

UNLOADED AT (tank number, unit, warehouse, etc.)
unit 6

COMMENTS
2.000 sp. was dropped will be unloaded when that

SECTION 3

LAB TECHNICIAN	ACCEPT	REJECT	REASON FOR REJECTION
<i>THP</i>	<input checked="" type="checkbox"/>		

COMMENTS

SECTION 4

SHIFT SUPERVISOR	ACCEPT	REJECT	REASON FOR REJECTION
<i>Daniel</i>	<input checked="" type="checkbox"/>		

PLANT WEIGHT	UNLOADING TIMES	
NET	START TIME	END TIME

COMMENTS

RAW MATERIAL RECEIVING RECORD

No 11479

CEDAR CHEMICAL 9000-1 REV: C

TIME IN AT GATE
0745

RECEIVED BY
M. Sullivan

SECTION 1

DATE	ORDER NO	CAR OR TRUCK NO	DECLARED WEIGHT
11-4-97	n/a	SNW 121340-6	Net n/a 41.976

SHIPPER	CARRIER
<i>Lilford-Hudson - Bayer Corp.</i>	<i>Triple E</i>

QUANTITY	CONTAINER	DESTINATION	RAW MAT CODE #	DESCRIPTION
1	S/C	unit #2	3020	DCA

COMMENTS
Lab Has C.O.A.

SECTION 2

RECIPIENT	TIME SAMPLE/CERTIFICATE TAKEN TO LAB
<i>M. Sullivan</i>	7:56

UNLOADED AT (tank number, unit, warehouse, etc.)
unit was dropped will be unloaded when cert is hat.

COMMENTS

SECTION 3

LAB TECHNICIAN	ACCEPT	REJECT	REASON FOR REJECTION
<i>TLP</i>	X		

COMMENTS

SECTION 4

SHIFT SUPERVISOR	ACCEPT	REJECT	REASON FOR REJECTION
<i>M. Sullivan</i>	X		

PLANT WEIGHT	UNLOADING TIMES	
NET	START TIME	END TIME

COMMENTS

GILSCOT GUIDROZ INTERNATIONAL INC
2816 DIVISION ST., STE.202
METAIRIE, LA.70002
PHONE:504 887 8897
FAX:504 887 8898
INTERNATIONAL FREIGHT FORWARDERS

DATE:11-17-97

CEDAR CHEMICAL CO
WEST HELENA ARKANSAS
ATTN BOB CHRISTIAN

AS PER OUR CONVERSATION THIS MORNING
WE HAVE 4 X 20' ISOTANK FROM BAYER CORPORATION
READY TO BE DELIVERED TO CEDAR, WEST HELENA UPON YOUR
REQUEST.

THE ARE:

SNIU-1210789

SNIU-1213279

SNIU-1213366

UTCU-2260070

AS PER OUR CONVERSATION WE WILL BE SENDING YOU
TWO TANKS TO CEDAR CHEMICAL W.HELENA UNIT 6
FOR TOMORROW 11-18-97
AND WE WILL WAIT FOR FURTHER INSTRUCTIONS ON THE OTHER TWO ISOTANKS

REGARDS
KEITH GUIDROZ
GILSCOT GUIDROZ INTL INC.



Telefax
**Industrial Chemicals Division
Organic Chemicals**

Date:	<u>10/29/97</u>	Pages:	<u>8</u>
To:	<u>Bob Christie</u>	From:	<u>Andy Vannatta</u>
Company:	<u>Cedar</u>	Company:	<u>Organic Chemicals</u>
Fax:	<u>870-572-8795</u>	Fax:	<u>(412) 777-4109</u>
Phone:	<u>870-572-3701 X227</u>	Phone:	<u>(412) 777-2512</u>

Re: 3.4.DCA -

 cc: Keith Guidero
 Brokers instructions only.
 504-887-8898

Attached is a copy of our brokers instructions
 + analysis covering four contracts of
 3.4 DCA expected to arrive in New Orleans
 off the OOCL Inapuation on 11/2/97.

Please call if you have any questions.

our Ref Nos 067 08631, 32, 38 484.

Andy

NOTICE OF CONFIDENTIALITY

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FRITZ COMPANIES, INC.
101 DELTA DRIVE/SUITE S
ST. ROSE, LA 70087
FAX: 504-466-4322

Bayer Corporation
100 Bayer Road
Pittsburgh, PA 15205-6741
Phone: 412 777-2000

OCTOBER 22, 1997

BAYER ORDER # : SEE ATTACHED
CUSTOMER : CEDAR CHEMICAL CORP
CUSTOMER PO : SEE ATTACHED
VESSEL : OOCL INSPIRATION
BL # : STOLT SNN971991
CONTAINER # : SEE ATTACHED
NEE WGT : SEE ATTACHED
PORT OF LOADING : ROTTERDAM
PORT OF ARRIVAL : NEW ORLEANS

ARRIVAL DATE : 11/07/97

10/17/97

ENCLOSED, PLEASE FIND DOCUMENTS PERTAINING TO THE FOLLOWING.

SEE ATTACHED

MAKE I.D. ENTRY IN THE NAME OF BAYER CORPORATION (IMPORTER'S # 25-1339219BU)

TRANSACTION BETWEEN RELATED PARTIES

ENTER WITH U. S. CUSTOMS AS :

H.S. # : SEE ATTACHED

RATE : SEE ATTACHED

CAS # : SEE ATTACHED

PLEASE ISSUE DELIVERY ORDER(S) TO :

CARRIER TO BE ADVISED

SHIP ON A COLLECT BASIS TO :

CEDAR CHEMICAL CORP
HIGHWAY 242
WEST HELENA, AR 72390

INLAND BILL OF LADING ATTACHED

SPECIAL INSTRUCTIONS :

NOTE ON DELIVERY ORDER: CARRIER TO CALL FOR DELIVERY APPOINTMENT
CUSTOMER REQUESTED CARRIER IS TRIPLE E TRANSPORT. CONTACT KEITH GUIDROZ
FOR ARRANGEMENTS 504-887-8897.

CC: CEDAR CHEMICAL CORP
XX, LOG, AV

JENNIFER HOLUB (JH)
412-777-2158

—ATTACHMENTS—



CUSTOMER : CEDAR CHEMICAL CORP
SMTU121078-9
11/07/97
CUSTOMER PO:

OOCL INSPIRATION
STOLT SNN971991
NET: 19620.00 KG

Bayer Corporation
100 Bayer Road
Pittsburgh, PA 15205-9741
Phone: 412 777-2000

BAYER PO# : 06Y63633 PRODUCT : N826 CONT CD : 99 NWGT : 19620.00 KG

1 TANK CONTAINER(S) OF 3,4 DICHLOROANILINE, PURE

H.S. # : 2921.42.2300
RATE : 1.70¢ / KG + 15.10 %
CAS # : NOT REQUIRED
POSITIVE TSCA CERTIFICATION REQUIRED

CUSTOMER : CEDAR CHEMICAL CORP
SMTU121327-9
11/07/97
CUSTOMER PO:

OOCL INSPIRATION
STOLT SNN971991
NET: 20220.00 KG

BAYER PO# : 06Y63632 PRODUCT : N826 CONT CD : 99 NWGT : 20220.00 KG

1 TANK CONTAINER(S) OF 3,4 DICHLOROANILINE, PURE

H.S. # : 2921.42.2300
RATE : 1.70¢ / KG + 15.10 %
CAS # : NOT REQUIRED
POSITIVE TSCA CERTIFICATION REQUIRED

CUSTOMER : CEDAR CHEMICAL CORP
SMTU121336-6
11/07/97
CUSTOMER PO:

OOCL INSPIRATION
STOLT SNN971991
NET: 20100.00 KG

BAYER PO# : 06Y63631 PRODUCT : N826 CONT CD : 99 NWGT : 20100.00 KG

1 TANK CONTAINER(S) OF 3,4 DICHLOROANILINE, PURE

H.S. # : 2921.42.2300
RATE : 1.70¢ / KG + 15.10 %
CAS # : NOT REQUIRED
POSITIVE TSCA CERTIFICATION REQUIRED



CUSTOMER : CEDAR CHEMICAL CORP
UFCU226007-0
11/07/97
CUSTOMER PO:

OOCL INSPIRATION
STOLF SSS971991
NET: 18800.00 KG

Bayer Corporation
100 Bayer Road
Pittsburgh, PA 15205-8741
Phone: 412 777-2000

BAYER PO# : 06Y63634 PRODUCT : N826 CONF CD : 99 HWGT : 18800.00 KG

1 TANK CONTAINER(S) OF 3,4 DICHLOROANILINE, PURE

H.S. # : 2921.42.2300
RATE : 1.70¢ / KG + 15.10 ¢
CAS # : NOT REQUIRED
POSITIVE TSCA CERTIFICATION REQUIRED



BAYER AG
ZF ZENTRALE ANALYTIK

CERTIFICATE OF ANALYSIS

061/062
PAGE 1 END
DATE 13.10.97

WERK LEVERKUSEN

BAYER CORPORATION

ATTN. A. VANHATTA
100 BAYER ROAD
PITTSBURGH PA 15205-9741
USA

ARTICLE: 3,4-DICHLOROANILINE LIQUID MOL 162.0
ART-NO.: 02 00734186

SAMPLE-NO.	BATCH-NO.	WORK-ORDER-NO.	PURCHASE-ORDER-NO.	QUANTITY (KG)
410784-0	0802513D7	00802513D7	(SEE MARKS)	20100

DATE OF RELEASE: 13.10.97

SAMPLE WAS TAKEN ACC. TO COMPANY STAND. AND TESTED WITH THE FOLLOWING RESULT:

TEST	RESULT	UNT	REQUIREMENT	
			MIN	MAX
APPEARANCE	COMPLIES		MUST COMPLY	
ASSAY (GAS CHROMATOGRAPHY)	99.5	%	99	
WATER (K. FISCHER)	0.04	%	0.1	
3,4,3',4'-TETRACHLOROAZOBENZENE	3	MG/KG	50	

MARKS:

BAYER
04-087455
NEW ORLEANS
06763631 NB26
3,4 DICHLOROANILINE, PURE
GROSS 23200 KG
NET 20100 KG
MADE IN GERMANY

SNU 121336-6

H. Siegert
DR. SIEGERT



BAYER AG
 ZF ZENTRALE ANALYTIK
 WERK LEVERKUSEN

CERTIFICATE OF ANALYSIS

061/062
 PAGE 1 END
 DATE 16.10.97

BAYER CORPORATION

ATTN. A. VANNATTA
 100 BAYER ROAD
 PITTSBURGH PA 15205-9741
 USA

ARTICLE: 3,4-DICHLOROANILINE LIQUID MOL 162.0
 ART-NO.: 02 00734156

SAMPLE-NO. | BATCH-NO. | WORK-ORDER-NO. | PURCHASE-ORDER-NO. | QUANTITY (KG)
 410793-0 | 0802514B7 | 00802514B7 | (SEE MARKS) | 20220

DATE OF RELEASE: 15.10.97

SAMPLE WAS TAKEN ACC. TO COMPANY STAND. AND TESTED WITH THE FOLLOWING RESULT:

TEST	RESULT	UNIT	REQUIREMENT	
			MIN	MAX
APPEARANCE	COMPLIES		MUST COMPLY	
ASSAY (GAS CHROMATOGRAPHY)	99.3	%	99	
WATER (K.FISCHER)	0.02	%	0.1	
3,4,3',4'-TETRACHLOROAZOBENZENE	2	MG/KG	50	

MARKS:

BAYER
 04-087455
 NEW ORLEANS
 06Y63632 NB26
 3,4 DICHLOROANILINE, PURE
 GROSS 23320 KG
 NET 20200 KG
 MADE IN GERMANY

CONTAINER-NO.:
 SNTU121327-9

iv. bay
 DR. SIEMERDT



BAYER AG
 ZF ZENTRALE ANALYTIK
 WERK LEVERKUSEN

CERTIFICATE OF ANALYSIS

061/062
 PAGE 1 END
 DATE 15.10.97

BAYER CORPORATION

ATTN. A. VANMATA
 100 BAYER ROAD
 PITTSBURGH PA 15205-9741
 USA

ARTICLE: 3,4-DICHLOROANILINE LIQUID MOL 162.0
 ART-NO.: 02 00734156

SAMPLE-NO.	BATCH-NO.	WORK-ORDER-NO.	PURCHASE-ORDER-NO.	QUANTITY (KG)
410800-0	0802515L7	00802515L7	(SEE MARKS)	19620

DATE OF RELEASE: 14.10.97

SAMPLE WAS TAKEN ACC. TO COMPANY STAND. AND TESTED WITH THE FOLLOWING RESULT:

TEST	RESULT	UNIT	REQUIREMENT	
			MIN	MAX
APPEARANCE	COMPLIES		MUST COMPLY	
ASSAY (GAS CHROMATOGRAPHY)	99.5	%	99	
WATER (K.FISCHER)	0.02	%	0.1	
3,4,3',4'-TETRACHLOROAZOBENZENE	1	MG/KG	50	

MARKS:

 BAYER
 04-087455
 NEW ORLEANS
 06Y63633 N826
 3,4 DICHLOROANILINE, PURE
 GROSS KG
 NET 19620 KG
 MADE IN GERMANY

CONTAINER-NO.:
 SMTU121078-9

M. Sieberdt
 DR. SIEBERDT



BAYER AG
ZF ZENTRALE ANALYTIK

CERTIFICATE OF ANALYSIS

061/062
PAGE 1 END
DATE 16.10.97

WERK LEVERKUSEN

BAYER CORPORATION

ATTN. A. VANNATTA
100 BAYER ROAD
PITTSBURGH PA 15205-9741
USA

ARTICLE: 3,4-DICHLOROANILINE LIQUID MOL 163.0
ART-NO.: 02 00734156

SAMPLE-NO.	BATCH-NO.	WORK-ORDER-NO.	PURCHASE-ORDER-NO.	QUANTITY (KG)
410814-0	080251617	0080251617	(SEE MARKS)	20000

DATE OF RELEASE: 15.10.97

SAMPLE WAS TAKEN ACC. TO COMPANY STAND. AND TESTED WITH THE FOLLOWING RESULT:

TEST	RESULT	UNIT	REQUIREMENT	
			MIN	MAX
APPEARANCE	COMPLIES		MUST COMPLY	
ASSAY (GAS CHROMATOGRAPHY)	99.5	%	99	
WATER (K.FISCHER)	<0.01	%	0.1	
3,4,3',4'-TETRACHLOROAZOBENZENE	6	NG/KG	50	

MARKS:

BAYER
04-087455
NEW ORLEANS
06Y63634 N926
3,4 DICHLOROANILINE, PURE
GROSS KG
NET 20000 KG
MADE IN GERMANY

CONTAINER-NO.:
UTC0226007-0

W. Loh
DR. STEWART

RAW MATERIAL RECEIVING RECORD

№ 11575

CEDAR CHEMICAL 9000-1 REV: C

TIME IN AT GATE
0430

RECEIVED BY
KC

SECTION 1

DATE ORDER NO. CAR OR TRUCK NO. DECLARED WEIGHT

11-18-97 04-087455 SNIU-121327-9 Net 20,220

SHIPPER: BAYOR chemical CARRIER: Triple E 44,577

QUANTITY	CONTAINER	DESTINATION	RAW MAT CODE #	DESCRIPTION
1	S-C	UNIT 6	3020	D.C.A

COMMENTS
NO COA OK by Y RIAI

SECTION 2

RECIPIENT TIME SAMPLE/CERTIFICATE TAKEN TO LAB

DAW 5/15

UNLOADED AT (tank number, unit, warehouse, etc.)

COMMENTS

SECTION 3

LAB TECHNICIAN ACCEPT REJECT REASON FOR REJECTION

TCP X

COMMENTS

SECTION 4

SHIFT SUPERVISOR ACCEPT REJECT REASON FOR REJECTION

[Signature] X

PLANT WEIGHT UNLOADING TIMES
NET START TIME END TIME

COMMENTS

RAW MATERIAL RECEIVING RECORD

NO 11580

CEDAR CHEMICAL 9000-1 REV: C

TIME IN AT GATE
12:15

RECEIVED BY
M. A. D. ...

SECTION 1

DATE	ORDER NO.	CAR OR TRUCK NO.	DECLARED WEIGHT
11-18-97	04087455	SNIU 1210789	Net w/c 43164

SHIPPER	CARRIER
<i>Bayer</i>	<i>Triple E</i>

QUANTITY	CONTAINER	DESTINATION	RAW MAT CODE #	DESCRIPTION
1	S/C	unit #6	3020	DCA

COMMENTS
Lab Has C.O.A.

SECTION 2

RECIPIENT	TIME SAMPLE/CERTIFICATE TAKEN TO LAB
<i>M. L. Hutton</i>	<i>12:30</i>

UNLOADED AT (tank number, unit, warehouse, etc.)
T-6211 (Spotted)

COMMENTS
Spotted truck putting steam to melt!!

SECTION 3

LAB TECHNICIAN	ACCEPT	REJECT	REASON FOR REJECTION
<i>C. H.</i>	<input checked="" type="checkbox"/>		

COMMENTS *COA 99.5*

SECTION 4

SHIFT SUPERVISOR	ACCEPT	REJECT	REASON FOR REJECTION
<i>L. Allen</i>	<input checked="" type="checkbox"/>		

PLANT WEIGHT	UNLOADING TIMES	
NET	START TIME	END TIME
1		

COMMENTS

RAW MATERIAL RECEIVING RECORD

N: 10871

CEDAR CHEMICAL 9000-F REV: C

211440

TIME IN AT GATE
0400

RECEIVED BY
B. Mc *Smith*

SECTION 1

DATE	ORDER NO.	CAR OR TRUCK NO.	DECLARED WEIGHT
11-20-97	04-087455	Sea-Cont # UTC4-2260070	47800 LBS Net 18800.00 KG

SHIPPER	CARRIER
Bayer	Irish E

QUANTITY	CONTAINER	DESTINATION	RAW MAT CODE #	DESCRIPTION
1	S/c	unit # 6	3080	DCA

COMMENTS
DCA is in Cedar Lab on this material Per, V. Smith

SECTION 2

RECIPIENT	TIME SAMPLE/CERTIFICATE TAKEN TO LAB
<i>Q2 Kungler</i>	5:00

UNLOADED AT (tank number, unit, warehouse, etc.)
T6211

COMMENTS
SPOTTED AT UNIT

SECTION 3

LAB TECHNICIAN	ACCEPT	REJECT	REASON FOR REJECTION
<i>YH</i>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	

COMMENTS
*COA Assay 99.5
H2O <0.01*

SECTION 4

PLANT SUPERVISOR	ACCEPT	REJECT	REASON FOR REJECTION
<i>[Signature]</i>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	

PLANT WEIGHT	UNLOADING TIMES	
	START TIME	END TIME
NET	11 20 97 0500	

COMMENTS

RAW MATERIAL RECEIVING RECORD

No. 10872

CEDAR CHEMICAL 9000-1 REV: C

TIME IN AT GATE
0400

SECTION 1

RECEIVED BY
44312
B. McSintz

DATE	ORDER NO.	CARGO/TRUCK NO.	DECLARED WEIGHT
<i>11-20-97</i>	<i>04-087455</i>	<i>Sea. Cont # SNU-1213366</i>	<i>2010000 KG Net 44376 LBS</i>

SHIPPER	CARRIER
<i>Bayer</i>	<i>Triple</i>

QUANTITY	CONTAINER	DESTINATION	RAW MAT CODE #	DESCRIPTION
<i>1</i>	<i>S/C</i>	<i>unit #6</i>	<i>3020</i>	<i>DCA</i>

COMMENTS
Cof A in in Cedar Lab on this Material Per. V. Foster

SECTION 2

RECIPIENT	TIME SAMPLE/CERTIFICATE TAKEN TO LAB
<i>J. J. Knight</i>	<i>5:00</i>

UNLOADED AT (tank number, unit, warehouse, etc.)
Tk 211

COMMENTS
Spotted @ Unit

SECTION 3

SHIP TECHNICIAN	ACCEPT	REJECT	REASON FOR REJECTION
<i>UH</i>	<i>✓</i>		

COMMENTS
*CoA Assay 99.5
H2O .04*

SECTION 4

SHIP SUPERVISOR	ACCEPT	REJECT	REASON FOR REJECTION
<i>[Signature]</i>	<i>✓</i>		

PLANT WEIGHT	UNLOADING TIMES	
<i>NET 44456</i>	START TIME <i>11-20-97 0500</i>	END TIME

COMMENTS



Telefax

Industrial Chemicals Division
Organic Chemicals

Date: 10/29/97
To: Bob Christian
Company: Cedar
Fax: 870-572-8795
Phone: 870-572-8701 X 227

Pages: 5
From: Andy Vannatta
Company: Organic Chemicals
Fax: (412) 777-4109
Phone: (412) 777-2512

Re: 3.4 PCA

cc: Keith Guidroz
Brokers instructions only
504-887-8898

Attached is a copy of our brokers instructions
& analysis covering two containers of
3.4 PCA expected to arrive in New Orleans
off the Houston Express on 11/15.

Our Ref Nos 06463635 + 36.

Please call if you have any questions.

Andy

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FRITE COMPANIES, INC.
101 DELTA DRIVE/SUITE 8
ST. ROSE, LA 70087
FAX: 504-456-4322

Bayer Corporation
100 Bayer Road
Pittsburgh, PA 15206-0741
Phone: 412 777-2000

OCTOBER 23, 1997

BAYER ORDER # : SEE ATTACHED
CUSTOMER : CEDAR CHEMICAL CORP
CUSTOMER PO :

VESSEL : HOUSTON EXPRESS

ARRIVAL DATE : 11/15/97

BL # : HOYER 1297390526

CONTAINER # : TIFULL7076-7

NET WGT : 39460.00 KG

PORT OF LOADING : ANTWERPEN

10/20/97

PORT OF ARRIVAL : NEW ORLEANS

ENCLOSED, PLEASE FIND DOCUMENTS PERTAINING TO THE FOLLOWING.

SEE ATTACHED

MAKE I.D. ENTRY IN THE NAME OF BAYER CORPORATION (IMPORTER'S # 25-1339219BU)

TRANSACTION BETWEEN RELATED PARTIES

ENTER WITH U. S. CUSTOMS AS :

H.S. # : SEE ATTACHED

RATE : SEE ATTACHED

CAS # : SEE ATTACHED

PLEASE ISSUE DELIVERY ORDER(S) TO :

CARRIER TO BE ADVISED

SHIP ON A COLLECT BASIS TO :

CEDAR CHEMICAL CORP
HIGHWAY 242
WEST HELENA, AR 72390

INLAND BILL OF LADING ATTACHED

SPECIAL INSTRUCTIONS :

NOTE ON DELIVERY ORDER: CARRIER TO CALL FOR DELIVERY APPOINTMENT
BROKER TO SUPPLY CARRIER WITH ATTACHED MSDS AND BULK TAGS. CUSTOMER
REQUESTED CARRIER IS TRIPLE E TRANSPORT. CONTACT KEITH GUIDROZ AT 504-887-8897
FOR DELIVERY APPOINTMENT.

CC: CEDAR CHEMICAL CORP
XX, LOR, AV, JB

—ATTACHMENTS—

JENNIFER HOLUB (JH)
412-777-2158



CUSTOMER : CEDAR CHEMICAL CORP
TIFU117076-7
11/15/97
CUSTOMER PO:

HOUSTON EXPRESS
BAYER 1297390526
NET: 39460.00 KG

Bayer Corporation
100 Bayer Road
Pittsburgh, PA 15205-8741
Phone: 412 777-2000

BAYER PO# : 06Y63635 PRODUCT : N826 CONT CD : 99 NWGT : 19700.00 KG

1 TANK CONTAINER(S) OF 3,4 DICHLOROANILINE, PURE

H.S. # : 2921.42.2300
RATE : 1.70¢ / KG + 15.10 ¢
CAS # : NOT REQUIRED
POSITIVE TSCA CERTIFICATION REQUIRED

BAYER PO# : 06Y63636 PRODUCT : N826 CONT CD : 99 NWGT : 19760.00 KG

1 TANK CONTAINER(S) OF 3,4 DICHLOROANILINE, PURE

H.S. # : 2921.42.2300
RATE : 1.70¢ / KG + 15.10 ¢
CAS # : NOT REQUIRED
POSITIVE TSCA CERTIFICATION REQUIRED

RAW MATERIAL RECEIVING RECORD

No 10820

CEDAR CHEMICAL 9000-1 REV: C

TIME IN AT GATE
0930

RECEIVED BY
M. Sullivan

SECTION 1

DATE	ORDER NO	CAR OR TRUCK NO	DECLARED WEIGHT
11-25-97	04087455	TIFU117079-3	Net 44996

SHIPPER	CARRIER
<i>Bayer Corp.</i>	<i>Haisle E 43491</i>

QUANTITY	CONTAINER	DESTINATION	RAW MAT CODE #	DESCRIPTION
1	S/C	unit #6	3020	DCA

COMMENTS
Lab Has C.O.A.

SECTION 2

RECIPIENT	TIME SAMPLE/CERTIFICATE TAKEN TO LAB

UNLOADED AT (tank number, unit, warehouse, etc.)

COMMENTS

SECTION 3

LAB TECHNICIAN	ACCEPT	REJECT	REASON FOR REJECTION
<i>JH</i>	<input checked="" type="checkbox"/>		

COMMENTS
99.2%

SECTION 4

SHIFT SUPERVISOR	ACCEPT	REJECT	REASON FOR REJECTION

PLANT WEIGHT	UNLOADING TIMES	
	START TIME	END TIME

COMMENTS
Dropped container at unit. 11/25/97

RAW MATERIAL RECEIVING RECORD

NO. 10821

CEDAR CHEMICAL 9000-1 REV: C

TIME IN AT GATE
12:15

RECEIVED BY
M. Sullivan

SECTION 1

DATE: 11-25-97 ORDER NO: 04087455 CAR OR TRUCK NO: TIFU117076-7 DECLARED WEIGHT: Net 44996

SHIPPER: *Bayer Corp.* CARRIER: *Bayer* 43,563

QUANTITY	CONTAINER	DESTINATION	RAW MAT CODE #	DESCRIPTION
1	S/C	unit #6	3020	DCA

COMMENTS
Lab Has C.O.A.

SECTION 2

RECIPIENT: TIME SAMPLE/CERTIFICATE TAKEN TO LAB:

UNLOADED AT (tank number, unit, warehouse, etc.):

COMMENTS

SECTION 3

LAB TECHNICIAN: *JH* ACCEPT: REJECT: REASON FOR REJECTION:

COMMENTS
99.6%

SECTION 4

SHIFT SUPERVISOR: *[Signature]* ACCEPT: REJECT: REASON FOR REJECTION:

PLANT WEIGHT: NET UNLOADING TIMES: START TIME: END TIME: *13:15*

COMMENTS
Dropped container at unit, 11/25/97



FRITZ COMPANIES, INC.
101 DELTA DRIVE/SUITE 8
ST. ROSE, LA 70087
FAX: 504-466-4322

Bayer Corporation
100 Bayer Road
Pittsburgh, PA 15205-9741
Phone: 412 777-2000

NOVEMBER 10, 1997

BAYER ORDER # : 06Y63637
CUSTOMER : CEDAR CHEMICAL CORP
CUSTOMER PO :
VESSEL : SL INTEGRITY
BL # : STOLT SNN972044
CONTAINER # : SNIU121307-3
NET WGT : 18860.00 KG
PORT OF LOADING : ROTTERDAM
PORT OF ARRIVAL : NEW ORLEANS

ARRIVAL DATE : 11/24/97

10/23/97

ENCLOSED, PLEASE FIND DOCUMENTS PERTAINING TO THE FOLLOWING.

1 TANK CONTAINER(S) OF 3,4 DICHLOROANILINE, PURE (N826 99)

MAKE I.D. ENTRY IN THE NAME OF BAYER CORPORATION (IMPORTER'S # 25-1339219BU)

TRANSACTION BETWEEN RELATED PARTIES

ENTER WITH U. S. CUSTOMS AS :
H.S. # : 2921.42.2300
RATE : 1.70¢ / KG + 15.10 %
CAS # : NOT REQUIRED
POSITIVE TSCA CERTIFICATION REQUIRED

PLEASE ISSUE DELIVERY ORDER(S) TO : CARRIER TO BE ADVISED

SHIP ON A COLLECT BASIS TO :
CEDAR CHEMICAL CORP
HIGHWAY 242
WEST HELENA, AR 72390

INLAND BILL OF LADING ATTACHED

SPECIAL INSTRUCTIONS :
NOTE ON DELIVERY ORDER: CARRIER TO CALL FOR DELIVERY APPOINTMENT
BROKER TO SUPPLY CARRIER WITH ATTACHED MSDS AND BULK TAGS. CONTACT KEITH
GUIDROZ AT 504-887-8897 TO SET UP DELIVERY. CARRIER WILL BE TRIPLE E
TRANSPORT.

CC: CEDAR CHEMICAL CORP
XX, LOG, AV, JB

JENNIFER HOLUB (JH)
412-777-2158



BAYER AG
ZF ZENTRALE ANALYTIK

CERTIFICATE OF ANALYSIS

061/062
PAGE 1 END
DATE 22.10.97

WERK LEVERKUSEN

BAYER CORPORATION

ATTN. A. VANDATTA
100 BAYER ROAD
PITTSBURGH PA 15205-9741
USA

ARTICLE: 3,4-DICHLOROANILINE LIQUID MOL 162.0
ART-NO.: 02 00734156

SAMPLE-NO.	BATCH-NO.	WORK-ORDER-NO.	PURCHASE-ORDER-NO.	QUANTITY (KG)
410864-0	0802819C7	00802819C7	(SEE MARKS)	18860

DATE OF RELEASE: 21.10.97

SAMPLE WAS TAKEN ACC. TO COMPANY STAND. AND TESTED WITH THE FOLLOWING RESULT:

TEST	RESULT	UNIT	REQUIREMENT	
			MIN	MAX
APPEARANCE	COMPLIES		MUST COMPLY	
ASSAY (GAS CHROMATOGRAPHY)	99.8	%	99	
WATER (K. FISCHER)	0.01	%	0.1	
3,4-DICHLOROANILINE	18	MG/KG	50	

MARKS:

BAYER
04-087455
NEW ORLEANS
06Y63637 N826
3,4 DICHLOROANILINE, PURE
GROSS KG
NET 18860 KG
MADE IN GERMANY

CONTAINER-NO.:
SNIUL21307-3

[Signature]
DR. WALKOWIAK



FRITZ COMPANIES, INC.
101 DELTA DRIVE/SUITE 8
ST. ROSE, LA 70087
FAX: 504-466-4322

Bayer Corporation
100 Bayer Road
Pittsburgh, PA 15205-8741
Phone: 412 777-8000

OCTOBER 30, 1997

BAYER ORDER # : 06Y63638
CUSTOMER : CEDAR CHEMICAL CORP
CUSTOMER PO :
VESSEL : SL INTEGRITY
BL # : HOYER 1297401475
CONTAINER # : TIFU117029-0
NET WGT : 20520.00 KG
PORT OF LOADING : ROTTERDAM
PORT OF ARRIVAL : NEW ORLEANS

ARRIVAL DATE : 11/24/97

10/22/97

ENCLOSED, PLEASE FIND DOCUMENTS PERTAINING TO THE FOLLOWING.

1 TANK CONTAINER(S) OF 3,4 DICHLOROANILINE, PURE (N626 99)

MAKE I.D. ENTRY IN THE NAME OF BAYER CORPORATION (IMPORTER'S # 25-1339219BU)

TRANSACTION BETWEEN RELATED PARTIES

ENTER WITH U. S. CUSTOMS AS :
H.S. # : 2921.42.2300
RATE : 1.70¢ / KG + 15.10 %
CAS # : NOT REQUIRED
POSITIVE TSCA CERTIFICATION REQUIRED

PLEASE ISSUE DELIVERY ORDER(S) TO : CARRIER TO BE ADVISED

SHIP ON A COLLECT BASIS TO :
CEDAR CHEMICAL CORP
HIGHWAY 242
WEST HELENA, AR 72390

INLAND BILL OF LADING ATTACHED

SPECIAL INSTRUCTIONS :
NOTE ON DELIVERY ORDER: CARRIER TO CALL FOR DELIVERY APPOINTMENT
BROKER TO SUPPLY CARRIER WITH ATTACHED MSDS AND BULK TAGS. CARRIER TO BE
USED IS TRIPLE E TRANSPORT. CONTACT KEITH GUIDROZ AT 504-887-8897 TO SET UP
A DELIVERY APPOINTMENT.

CC: CEDAR CHEMICAL CORP
KX, LOG, AV, JB

JENNIFER HOLUB (JH)
412-777-2158



Telefax
**Industrial Chemicals Division
Organic Chemicals**

Date:	<u>11/14/97</u>	Pages:	<u>3</u>
To:	<u>Bob Christian</u>	From:	<u>Andy Vannatta</u>
Company:	<u>CEDAR</u>	Company:	<u>Organic Chemicals</u>
Fax:	<u>9-1-870-572-3795</u>	Fax:	<u>(412) 777-4109</u>
Phone:	<u>9-1-870-572-3701 X227</u>	Phone:	<u>(412) 777-2512</u>
cc:	<u>Keith Guidroz 504-887-8898</u> <u>(Broker's Instructions Only)</u>		

Re: 3,4-DICHLOROANILINE

We are attaching brokers instructions and analysis covering Two
 container(s) of 3,4-DCA, arriving on the SL Integrity ON 11/17
SMITH 121307-3 06Y63637
 Container number (s) TIFU 117029-0 Our reference number (s) 06Y63638

NOTICE OF CONFIDENTIALITY

The information contained in and transmitted with this facsimile is confidential and/or exempt from disclosure under applicable law. It is intended only for the individual or entity named above. You are hereby notified that any dissemination, distribution, copying, or use of or reliance upon the information contained in and transmitted with this facsimile by or to anyone other than the recipient designated above by the sender is UNAUTHORIZED and STRICTLY PROHIBITED. If you have received this facsimile in error, please immediately call Bayer Corp. collect at (412) 777-2512 so that we can arrange for the return of the original facsimile at our cost. Thank you.

RAW MATERIAL RECEIVING RECORD

No 10849

CEDAR CHEMICAL 9000-1 REV: C

TIME IN AT GATE
0335

RECEIVED BY

SECTION 1

DATE	ORDER NO	TANK OR TRUCK NO	DECLARED WEIGHT
12-2-97	04-087455	TIFU-117029-0	Net 52955

SHIPPER	CARRIER
Bayer Chemical	Triple E

QUANTITY	CONTAINER	DESTINATION	RAW MAT CODE #	DESCRIPTION
1	50A CONTAINER	Unit 6	3020	DCA

COMMENTS
COA in Unit 6

SECTION 2

RECIPIENT	TIME SAMPLE/CERTIFICATE TAKEN TO LAB
Super Miller	0420

UNLOADED AT (tank number, unit, warehouse, etc.)
Unit 6 T6210 & T6211

COMMENTS

SECTION 3

LAB TECHNICIAN	ACCEPT	REJECT	REASON FOR REJECTION
CR	✓		

COMMENTS
COA 99.8
H.C. 02

SECTION 4

SHIFT SUPERVISOR	ACCEPT	REJECT	REASON FOR REJECTION
L. AMW	✓		

PLANT WEIGHT	UNLOADING TIMES	
NET	START TIME	END TIME

COMMENTS

RAW MATERIAL RECEIVING RECORD

NO 10848

CEDAR CHEMICAL 9000-1 REV: C

TIME IN AT GATE 0330	SECTION 1	RECEIVED BY KC
-------------------------	-----------	-------------------

DATE	ORDER NO	CAR OR TRUCK NO	DECLARED WEIGHT
12-2-97	04-087455	SNIA 121307-3	Net 41688

SHIPPER Bayer chemical	CARRIER triple E
---------------------------	---------------------

QUANTITY	CONTAINER	DESTINATION	RAW MAT CODE #	DESCRIPTION
1	SEA CONTAINER	UNIT 6	3020	DCA

COMMENTS
D. O.A. IN LAB

SECTION 2

RECIPIENT	TIME SAMPLE/CERTIFICATE TAKEN TO LAB
Dough Malt	0420

UNLOADED AT (tank number, unit, warehouse, etc.)
Unit 6 T6210 or T6211

COMMENTS

SECTION 3

LAB TECHNICIAN	ACCEPT	REJECT	REASON FOR REJECTION
C. M.	✓		

COMMENTS
CO₂ 99.2
H₂O = 0.1

SECTION 4

SHIFT SUPERVISOR	ACCEPT	REJECT	REASON FOR REJECTION
L. Allen	✓		

PLANT WEIGHT	UNLOADING TIMES	
NET	START TIME	END TIME

COMMENTS



49 Phillips Road 311 • Helena, AR 72342 • (870) 572-3701 • Fax (870) 572-3795

45098640

10/22/97



P. O. Box 2749 - Hwy. 242 - West Helena, AR 72390 - (501) 572-3701 - Fax (501) 572-3785

**ACIFLUORFEN ACID
SODIUM SALT SOLUTION**

CERTIFICATE OF ANALYSIS

Lot No.: ACI10722-01

Shipment Date: 10/22/97

Container No. : SP 8244/4130

B.O.L. No.: 20137677

<u>Properties</u>	<u>Specification</u>	<u>Results</u>
Strength	38-42 % w/w as Acifluorfen acid	: 41.5
R118118	max. 0.7 %	: .43
Isomer Ratio	max. 0.105 (target 0.100)	: .098
Dinitro 1-3 impurities	max. 1.0 %	: .7
Trinitro impurities	max. 0.3 %	: .04
Acetate	max. 2.0 % (target 1.0 %)	: .43
Dichloroethane	max. 100 ppm	: 12.6
Fluoride Ion	Report (ppm)	: 122.4
Ph	6.8-10.5	: 7.4
Iron	Report (ppm)	: 24.7

<u>Other Properties</u>	<u>Other Requirements</u>	<u>Results</u>
:		
:		
:		
:		
:		

10/22/97

Date

Calvin Drey
Quality Assurance

SHIPPING ZONE: Cedar Chemical Corporation
 Highway 242 South
 West Helena, Arkansas 72300

DESTINATION ZONE: Zeneca Ag Products 82E
 Cold Creek Plant
 Bucks, Alabama 36512

PURCHASE ORDER: 45098462 FTZ #: 14B

DATE SHIPPED: October 22, 1997 DATE PREPARED: 10/22/97

IN TRANSIT NUMBER: _____ ZONE STATUS: NPF

We certify that the historical data related to the merchandise included in this shipment is available at FTZ 14B.

HTSUS NUMBER: 2934.90.15 HTSUS DESCRIPTION: Acifluorfen/R118118

HTSUS TOTAL VALUE: 101,347.44 HTSUS TOTAL QUANTITY: 8,362

COUNTRY	HTSUS NUMBER	DESCRIPTION	UNIT VALUE	QUANTITY
ENGLAND	90200	R118118	12.12	6,584
ENGLAND	90200	R118118	12.12	1,778

EXTENDED VALUE
79,798.080
21,549.360
0.000

COUNTRY TOTAL
Value Sum

\$101,347.44

WEIGHED ON A FAIRBANKS SCALE

DATE 10/22/97

CUSTOMERS NAME ZENFCA

ADDRESS BUCK, AL

COMMODITY ACIFLUORFEN

CARRIER MATLACIL

30280 04:43AM DC 22 97

REMARKS

74700 06:16AM DC 22 97

LBS. GROSS

LBS. TARE - DRIVER ON _____ OFF _____

30280 04:43AM DC 22 97

LBS. NET @ _____ PER LB. PRICE _____

44420

SHIPPER Leo to Allen

WEIGHER Carroll Riley

FAIRBANKS SCALE CAT. 083905

Form Approved
OMB No. 1515-0001

1 CFR 10.60, 10.61, 10, 123.41, 123.42

TRANSPORTATION ENTRY AND MANIFEST OF
GOODS SUBJECT TO CUSTOMS INSPECTION
AND PERMIT

Entry No. ....145, 344, 780.....
Class of Entry.....IT (I.T.)(W&T.)(W&B.L.)(T.E.)(Drawback, etc.)

UNITED STATES CUSTOMS SERVICE

Entry No.
Port
Date

DIST. No. 20 Port Code No. 06 First U.S. Port of Unloading Norfolk, Va

Entered or imported by Zenega Ag Inc. Wilmington, Delaware to be shipped

on bond via M.G. Maher & Co., Inc. BOND #208506874 consigned to

District Director of Customs At Mobile, Al 19-01 Final foreign destination

Foreign port of lading N/A B/L No. N/A Date of sailing N/A

Imported on the N/A Flag N/A on N/A via N/A

Exported from N/A on N/A Goods now at Sub-Zone 14B

Mark and Numbers of Packages	DESCRIPTION AND QUANTITY OF MERCHANDISE NUMBER AND KIND OF PACKAGES (Describe fully as per shipping papers)	GROSS WEIGHT IN POUNDS	VALUE (Dollars only)	RATE	DUTY
45098640 Non-Privileged Foreign	48960 LBS Gross (8000 AK) Acifluorfen Sodium Salt Solution Not Regulated by DOT Transfer Merchandise From FTZ #14B to FTZ #82B Non-Privileged Foreign	48960 LBS	\$103419.00 2934.90.15 11.48		\$11789.00

10. No.

CERTIFICATE OF LADING FOR TRANSPORTATION IN BOND AND/OR LADING FOR EXPORTATION FOR

Mobile, Al 19-01

WITH THE EXCEPTIONS NOTED ABOVE, THE WITHIN-DESCRIBED GOODS WERE:

Delivered to the Carrier named above, for delivery to the District Director of Customs at destination sealed with Customs seals

Loaded on the—

which cleared for—

on

as verified by export records.

(Inspector)

(Date)

I truly declare that the statements contained herein are true and correct to the best of my knowledge and belief.

Entered or withdrawn by

M.G. Maher & Co., Inc.

Atty-in-Fact

To the Inspector or Warehouse Officer: The above-described goods shall be disposed of as specified herein.

For the District Director of Customs.

Received from the District Director of Customs of above district the merchandise described in this manifest for transportation and delivery into the custody of the customs officers at the port named above, all packages in apparent good order except as noted hereon.

M.G. Maher & Co., Inc.

Atty-in-Fact

Approved through 8131/84, OMB No: 1518-0028.

CENSUS USE ONLY

DEPARTMENT OF THE TREASURY
UNITED STATES CUSTOMS SERVICE

APPLICATION FOR
FOREIGN-TRADE ZONE ADMISSION
AND/OR STATUS DESIGNATION

1. ZONE NO. AND LOCATION (Address) SUB ZONE 82B ZENECA, INC. BUCKS, AL
2. DISTRICT/PORT CODE 1901

19 CFR 148.22, 148.32, 148.35-148.37, 148.39-148.41, 146.44, 146.53, 146.68

3. IMPORTING VESSEL, IS PLUG/OFFER CARRIER	4. EXPORT DATE	5. IMPORT DATE	6. ZONE ADMISSION NO. 19971023
7. U.S. PORT OF UNLOADING	8. FOREIGN PORT OF LADING	9. BILL OF LADING/AWB NO.	10. INWARD TEST NO.
11. INBOUND CARRIER	12. I.T. NO AND DATE 145344780 10/22/97	13. I.T. FROM (Port) MEMPHIS, TN.	

14. STATISTICAL INFORMATION FURNISHED DIRECTLY TO BUREAU OF CENSUS BY APPLICANT YES NO

15. NO OF PACKAGES AND COUNTRY OF ORIGIN	16. DESCRIPTION OF MERCHANDISE	17. HTSUS NO.	18. QUANTITY (HTSUS)	19. GROSS WEIGHT	20. SEPARATE VALUE & AGOR (HTS)
35098640	8362AKACIPLUORFEN SODIUM SALT SOLUTION IRS# 51-011232002 TRANSFER OF MERCHANDISE FROM FTZ 14B to 82E	2934.90.15	44420	75300#	\$101347.

RECEIVED
OCT 23 9 58 AM '97
BUSINESS DISTRICT
OF MOBILE, ALA
MOBILE, ALA

BONDED TRUCKER: M.G. MAHER & CO., INC.

22. I hereby apply for admission of the above merchandise into the Foreign Trade Zone. I declare to the best of my knowledge and belief that the above merchandise is not prohibited entry into the Foreign Trade Zone within the meaning of section 3 of the Foreign Trade Zones Act of 1934, as amended, and section 148.31, Customs Regulations.

23. I hereby apply for the status designation indicated:
 NONPRIVILEGED FOREIGN (19 CFR 148.42) PRIVILEGED FOREIGN (19 CFR 148.41) ZONE RESTRICTED (19 CFR 148.44) DOMESTIC (19 CFR 148.43)

24. APPLICANT'S NAME M. G. MAHER & CO., INC.	25. BY (Signature) <i>[Signature]</i>	26. TITLE IN FACT ATTY IN FACT	27. DATE 10/23/97
F.T.Z. AGREES TO RECEIVE MERCHANDISE INTO THE ZONE <input checked="" type="checkbox"/>	28. FOR THE FTZ OPERATOR (Signature) M.G. MAHER & CO., INC.	29. TITLE ATTY IN FACT	30. DATE 10/23/97
PERMIT Permission is hereby granted to transfer the above merchandise into the Zone.	31. DISTRICT DIRECTOR OF CUSTOMS BY (Signature) <i>[Signature]</i>	32. TITLE Inspector	33. DATE 10/23/97
PERMIT The above merchandise has been granted the requested status.	34. DISTRICT DIRECTOR OF CUSTOMS BY (Signature) <i>[Signature]</i>	35. TITLE	36. DATE 10/23/97

37. The goods described herein are authorized to be transferred: without exception except as noted below

PERMIT TO TRANSFER	38. CUSTOMS OFFICER AT SHIP/LIN (Signature) <i>[Signature]</i>	39. TITLE Inspector	40. STATION Mobile, AL	41. DATE 10/23/97
	42. RECEIVED FOR TRANSFER TO ZONE (Driver's Signature) <i>[Signature]</i>	43. CARTMAN	44. CHL NO.	45. DATE 10/23/97

46. To the District Director of Customs: The above merchandise was received at this Zone on the date shown except as noted below

FTZ OPERATOR'S REPORT OF MERCHANDISE RECEIVED AT ZONE	47. FOR THE OPERATOR (Signature) M. G. MAHER & CO., INC.	48. TITLE ATTY IN FACT	49. DATE
---	---	---------------------------	----------

OMB No 1519-0045

TRANSPORTATION ENTRY AND MANIFEST OF GOODS SUBJECT TO CUSTOMS INSPECTION AND PERMIT

UNITED STATES CUSTOMS SERVICE

Entry No. 145,344,780
Class of Entry TP
(U.T., W.S.T., W.A.S., U.S., D.P., etc.)

Entry No.
Port
Date

Dist. No. 20 Port Code No. 06 First U.S. Port of Unloading Norfolk, VA

Entered or imported by Zeneca Ag Inc, Wilmington, Delaware to be shipped

In bond via N.G. Maher & Co., Inc. BOND #208506874 (CBL Number) (Vessel or carrier) (Car number and initial) (Port or station) consigned to

District Director of Customs At Mobile, Al 19-01 Final foreign destination
Consignee Zeneca Ag, Inc. C/O N.G. Maher & Co., Inc. (At customs port of exit for destination) (For exportations only)

Foreign port of lading N/A B/L No. N/A Date of sailing N/A
(Above information to be furnished only when merchandise is imported by vessel)

Imported on the N/A Flag N/A on N/A via N/A
(Name of vessel or carrier and motive power) (Date imported) (Last foreign port)

Exported from N/A on N/A Goods now at Sub-Zone 14B
(Country) (Date) (Name of warehouse, street, pier, etc.)

Table with 5 columns: Marks and Numbers of Packages, DESCRIPTION AND QUANTITY OF MERCHANDISE NUMBER AND KIND OF PACKAGES, GROSS WEIGHT IN POUNDS, VALUE (Dollars only), RATE, DUTY. Row 1: 45098640, 48960 LBS Gross, 48960 LBS, \$103419.00, \$11799.00. Description: (8000 AK) Acifluorfen Sodium Salt Solution, Not Regulated by DOT, Transfer Merchandise From PTE #14B to PTE #82E, Non-Privileged Foreign.

G.O. No.
CERTIFICATE OF LADING FOR TRANSPORTATION IN BOND AND/OR LADING FOR EXPORTATION FOR
Mobile, Al 19-01
WITH THE EXCEPTIONS NOTED ABOVE, THE WITHIN-DESCRIBED GOODS WERE:
Delivered to the Carrier named above, for delivery to the District Director of Customs at destination sealed with Customs seals
Nos. of the packages were (were not) labeled, bonded and sealed.

I duly declare that the statements contained herein are true and correct to the best of my knowledge and belief.
Entered or withdrawn by N.G. Maher & Co., Inc.
Atty. in Fact
To the Inspector or Warehouse Officer, The above-described goods shall be disposed of as specified herein.
Received from the District Director of Customs of above district the merchandise described in this manifest for transportation and delivery into the custody of the customs officers at the port named above, all packages in apparent good order except as noted hereon.
M.G. Maher & Co., Inc.
Attorney or Agent of Carrier

INSTRUCTIONS

all customs officers or Part 18, Customs Regulations, for the appropriate number of copies required for entry, withdrawal, or manifest. For the purpose of transfer under the cartage or lighterage provisions of a proper bond to the place of shipment from the port of entry, extra copies bearing a stamp or notation as to their intended use may be required for local administration.

As this form is the same whether used as an entry or withdrawal or manifest, all copies may be prepared at the same time by custom process, unless more than one vessel or vehicle is used, in which case a separate set of manifest must be prepared for each such vessel or vehicle.

Whenever this form is used as an entry or withdrawal, care should be taken that the kind of entry is plainly shown in the blank in the upper right-hand corner of the face of the entry.

This form may be printed by private parties provided that the supply printed conforms to the official form in size, wording, arrangement, and quality and color of paper and ink. For sale by District Directors of Customs.

RECORD OF CARTAGE OR LIGHTERAGE

Delivered to Cartman or Lighterman in apparent good condition except as noted on this form

CONVEYANCE	QUANTITY	DATE	DELIVERED	RECEIVED	RECEIVED
MS NABER & CO. INC	8000AK	10/22/97	8362AK (Inspector or Warehouse Officer)	8362AK (Cartman or Lighterman)	10/22/97 (Date) (Inspector)
			(Inspector or Warehouse Officer)	(Cartman or Lighterman)	(Date) (Inspector)
			(Inspector or Warehouse Officer)	(Cartman or Lighterman)	(Date) (Inspector)
Total			(Warehouse proprietor)		

CERTIFICATES OF TRANSFER (If required)

I certify that within described goods were transferred by reason of _____ to _____ on _____ and sealed with _____ or seals Nos. _____ and that goods were in same apparent condition as noted on original lading except _____

Inspector, Conductor, or Master

I certify that within described goods were transferred by reason of _____ to _____ on _____ and sealed with _____ or seals Nos. _____ and that goods were in same apparent condition as noted on original lading except _____

Inspector, Conductor, or Master

INSPECTED

at _____ on _____ (Date) and seals found _____

If transfer occurs within city limits of a customs port or station, customs officers must be notified to supervise transfer.

INSPECTOR'S REPORT OF DISCHARGE AT DESTINATION

Port _____ Station _____ (Date)

TO THE DISTRICT DIRECTOR OF CUSTOMS: Delivering to _____ Car No. _____ Initial _____

Arrived _____ (Date) Condition of car _____ of seals _____ of packages _____

Date of Delivery to Importer or Gen. Order	PACKAGES	No. and Kind of Entry or General Order	Builded Truck or Lighter No.	CONVEYANCE, ETC.

I certify above report is correct

Inspector

Paperwork Reduction Act Notice: The Paperwork Reduction Act of 1980 says we must tell you why we are collecting this information, how we will use it, and whether you have an alternative to us. We ask for the information in order to carry out the laws and regulations administered by the U.S. Customs Service. These regulations and forms apply to customs in Customs custody. This is private information and should not be released to the public without the express written consent of the U.S. Customs Service.

CEDAR - WEST HELENA

PURCHASE ORDER
RECEIVING DEPT. COPY

P.O. NO. 04-087455
CHG. 00

P.O. DATE: 9/09/97 PAGE 1

REQUISITIONER: CHRISTIAN

VENDOR: BAYER CORPORATION
P. O. BOX 75662
CHARLOTTE, NC

28275

DATE REC.:	INV. NO.:
VIA:	VENDOR REF.:
PRO NO.:	SHIPPER WGHT:
FRT. CHARGE:	PPD/COLL:
SHIPPER NO:	REC. BY:

SHIP FROM:	F.O.B.:	FREIGHT TERMS:	VENDOR NO.:
SHIP VIA:	DUTY PD-NOLA	BUYER	02987 - 04
	DATE REQUIRED:	PAYMENT TERMS:	TAX PERMIT:
	10/13/97	NET 30 DAYS	3553

ITEM	QUANTITY ORDERED	QUANTITY RECEIVED	UNIT	INVENTORY NUMBER	DESCRIPTION	ACCOUNT NUMBER	UNIT PRICE
	20	1,200,000	LBS	CHRISTIAN	3,4 DCA	C 153 5910	1.84 LBS

TO BE SHIPPED FROM GERMANY IN 150-TANKS 20 M/T EACH -
TOTAL OF 28 TANKS. ARRIVAL NEW ORLEANS AS FOLLOWS:

2=W/O 10/13, 3=W/O 10/20, 3=W/O 10/27, 2=W/O 11/3, 2=W/O
11/10, 2=W/O 11/17, 3=W/O 11/24, 2=W/O 12/1, 2=W/O 12/8,
3=W/O 12/15, 2= W/O 12/22, 2=W/O 12/29

CEDAR MUST PAY FOR RETURN OF MT TANK TO NOLA DEPOT.

*** CONFIRMATION ***

Bayer - DCA

Load Oct

	Date	Inv #	Drms	Net	Lbs	US\$	Per # Price
DCA Purchase	10/28/97	3041727			41,976	77,235.84	1.840
DCA Purchase	10/28/97	3041713			42,285	77,804.40	1.840
Ocean Freight							0.000
Ocean Freight							0.000
Duty							0.000
Duty							0.000
Inland Freight							0.000
Total Cost delivered to Plant						155,040.24	3.694

Accounting:	\$ Dollars	Unit Cst
C153-5910	155,040.24	
C153-5920	0.00	
Total	84,281	155,040.24
		1.840



West Helena Acct. Dept.

RECEIVED
NOV 03 1997
RECEIVED

REMIT TO:
BAYER CORPORATION
P.O. BOX 75662
CHARLOTTE, NC 28275-5662

FIBERS ORGANICS AND RUBBER DIV
100 BAYER ROAD
PITTSBURGH, PA. 15205

ORDER INVOICE
BILL TO: 005761-001

NO: 3041727

DATE: 10-28-97 CO-21 DIV-10 DP-0012
SHIP TO: 005761-001

CEDAR CHEMICAL CORP
P.O. BOX 2749
W HELENA AR 72390

CEDAR CHEMICAL CORP
HWY 242 S
W HELENA AR 72390

INVOICE

PLEASE RETURN THE "DUPLICATE INVOICE" COPY WITH
REMITTANCE TO INSURE PROPER PAYMENT IS APPLIED TO YOUR
ACCOUNT

PURCHASE ORDER #: 04-087455
FOB: NEW ORLEANS, LA

ORDER INVOICE NO: 3041727 DATE: 10-28-97
FREIGHT: COLLECT DATE SHIPPED: 10-18-97

ITEM	CODES	DESCRIPTION	QUANTITY	UNIT PRICE	AMOUNT
01	N826	3,4-DICHLOROANILINE, PURE	41,976.00	1.84	77,235.84

080081 06Y63628
BULK CONT: SNIU121035 GW: 45,000 TW: 3,024 NW: 41,976 (LBS)
ASSAYX100.00

ENTERED
NOV 10 1997
WEST HELENA

SEND A CERTIFICATE OF DELIVERY OF IMPORTED MERCHANDISE TO THE
ATTENTION OF MR BOB CHRISTIAN; CEDAR CHEMICAL CORP; PO BOX
2749; WEST HELENA, AR 72390. SPECIAL PRICING APPLIES

VENDOR #		INVOICE #	
2987		3041727	
P.O. #	REC. RPT. #	INV. CD	INV. DATE
87455		1	102897
TERMS CODE	DUE DATE	FRT. BILL CD	SALES ORDER #
3			
INVOICE AMT.	DISC. ALLOWED		
77,235.84			
GL NUMBER	AMOUNT	WORK ORDER #	
C 1535910	77,235.84		
870			
DONE BY	DATE	APPROVED BY	ENTERED BY

77,235.84

LAST PAGE
ATION

**0076

IN YOUR PURCHASE ORDER, YOUR ORDER IS ACCEPTED
TO SUCH CONTRACT EXISTS, YOUR ORDER IS ACCEPTED
TERMS AND CONDITIONS PRINTED ON THE REVERSE SIDE



West Helena Acct. Dept.

RENIT TO:
BAYER CORPORATION
P.O. BOX 75662
CHARLOTTE, NC 28275-5662

RECEIVED
NOV 03 1997
RECEIVED

FIBERS ORGANICS AND RUBBER DIV
100 BAYER ROAD
PITTSBURGH, PA. 15205

ORDER INVOICE
BILL TO: 005761-001

NO:3041713

DATE: 10-28-97 CO-21 DIV-10 DP-0012
SHIP TO: 005761-001

CEDAR CHEMICAL CORP
P.O. BOX 2749
W HELENA AR 72390

CEDAR CHEMICAL CORP
HWY 242 S
W HELENA AR 72390

INVOICE

PLEASE RETURN THE "DUPLICATE INVOICE" COPY WITH
REMITTANCE TO INSURE PROPER PAYMENT IS APPLIED TO YOUR
ACCOUNT.

PURCHASE ORDER #:04-087455
FOB:NEW ORLEANS, LA

ORDER INVOICE NO: 3041713 DATE: 10-28-97
FREIGHT: COLLECT DATE SHIPPED: 10-18-97

ITEM	CODES	DESCRIPTION	QUANTITY	UNIT PRICE	AMOUNT
01	N826	3,4-DICHLOROANILINE, PURE	42,285.00	1.84	77,804.40

080081 06Y63627
BULK CONT:SNIU121063 GW: 50,000 TW: 7,715 NW: 42,285 (LBS)
ASSAY%100.00

SEND A CERTIFICATE OF DELIVERY OF IMPORTED MERCHANDISE TO THE
ATTENTION OF MR BOB CHRISTIAN; CEDAR CHEMICAL CORP; PO BOX
2749; WEST HELENA, AR 72390. SPECIAL PRICING APPLIES

ENTERED
NOV 10 1997
WEST HELENA

VENDOR #		INVOICE #	
2987		3041713	
P.O. #	REC RPT. #	INV. CD	INV. DATE
87455		1	102897
TERMS CODE	DUE DATE	FRT. BILL CD	SALES ORDER #
5			
INVOICE AMT.	DISC. ALLOWED		
77,804.40			
QL NUMBER	AMOUNT	WORK ORDER #	
C1835910	77,804.40	870	
DONE BY	DATE	APPROVED BY	ENTERED BY
RK	11-10-97	[Signature]	[Signature]

77,804.40

LAST PAGE
ATION

**0075

IN YOUR PURCHASE ORDER YOUR ORDER IS ACCEPTED
IF SUCH CONTRACT EXISTS YOUR ORDER IS ACCEPTED
TERMS AND CONDITIONS PRINTED ON THE REVERSE SIDE

Corporation, Pittsburgh, PA 15205-0741

AB0000079530

RAW MATERIAL RECEIVING RECORD

No 11002

CEDAR CHEMICAL 9000-1 REV: C

TIME IN AT GATE <i>0300</i>	SECTION 1	RECEIVED BY <i>KC</i>
--------------------------------	-----------	--------------------------

DATE	ORDER NO.	CAR OR TRUCK NO.	GROSS WEIGHT	NET WEIGHT
<i>12-30-97</i>	<i>NA</i>	<i>SNIA-121073-1</i>		<i>NA 42461</i>

SHIPPER <i>BAGOR</i>	CARRIER <i>TRIPLE E</i>
-------------------------	----------------------------

QUANTITY	CONTAINER	DESTINATION	RAW MAT CODE #	DESCRIPTION
<i>1</i>	<i>SEA CONTAINER</i>	<i>UNIT 6</i>	NA <i>NA</i>	<i>DCA</i>

COMMENTS
C.C.A. in unit

SECTION 2

RECIPIENT	TIME SAMPLE/CERTIFICATE TAKEN TO LAB

UNLOADED AT (tank number, unit, warehouse, etc.)

COMMENTS

SECTION 3

LAB TECHNICIAN	ACCEPT	REJECT	REASON FOR REJECTION
<i>TLP</i>	<i>X</i>		

COMMENTS

SECTION 4

SHIFT SUPERVISOR	ACCEPT	REJECT	REASON FOR REJECTION
<i>L. Allen</i>	<i>✓</i>		

PLANT WEIGHT	UNLOADING TIMES	
NET	START TIME	END TIME

COMMENTS
Dropped Sea container @ unit



Telefax
**Industrial Chemicals Division
Organic Chemicals**

Date:	<u>12 / 12 / 97</u>	Pages:	<u>5</u>
To:	<u>Bob Christian</u>	From:	<u>Andy Vannatta</u>
Company:	<u>CEDAR</u>	Company:	<u>Organic Chemicals</u>
Fax:	<u>9-1-870-572-3795</u>	Fax:	<u>(412) 777-4109</u>
Phone:	<u>9-1-870-572-3701 X227</u>	Phone:	<u>(412) 777-2512</u>
cc:	<u>Keith Guidroz 504-887-8898</u> <u>(Broker's Instructions Only)</u>		

Re: 3,4-DICHLOROANILINE

We are attaching brokers instructions and analysis covering Two
 container(s) of 3,4-DCA, arriving on the Galveston Bay ON 12/19
SMIU1210583 06468645
 Container number (s) SMIU1210583-9 Our reference number (s) 06468645

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FRITZ COMPANIES, INC.
101 DELTA DRIVE/SUITE 9
ST. ROSE, LA 70087
FAX: 504-466-4322

Bayer Corporation
100 Bayer Road
Pittsburgh, PA 15205-0741
Phone: 412 777-2000

DECEMBER 04, 1997

BAYER ORDER # : 06Y63645
CUSTOMER : CEDAR CHEMICAL CORP
CUSTOMER PO :
VESSEL : GALVESTON BAY
BL # : STOLT SNN 972275
CONTAINER # : SNIU121058-3
NET WGT : 19520.00 KG
PORT OF LOADING : ROTTERDAM
PORT OF ARRIVAL : NEW ORLEANS

ARRIVAL DATE : 12/19/97

11/28/97

ENCLOSED, PLEASE FIND DOCUMENTS PERTAINING TO THE FOLLOWING.

1 TANK CONTAINER(S) OF 3,4 DICHLOROANILINE, PURE (N826 99)

MAKE I.D. ENTRY IN THE NAME OF BAYER CORPORATION (IMPORTER'S # 25-1339219BU)

TRANSACTION BETWEEN RELATED PARTIES

ENTER WITH U. S. CUSTOMS AS :

H.S. # : 2921.42.2300
RATE : 1.70¢ / KG + 15.10 ¢
CAS # : NOT REQUIRED
POSITIVE TSCA CERTIFICATION REQUIRED

PLEASE ISSUE DELIVERY ORDER(S) TO :

CARRIER TO BE ADVISED

SHIP ON A COLLECT BASIS TO :

CEDAR CHEMICAL CORP
HIGHWAY 242
WEST HELENA, AR 72390

INLAND BILL OF LADING ATTACHED

SPECIAL INSTRUCTIONS :

NOTE ON DELIVERY ORDER: CARRIER TO CALL FOR DELIVERY APPOINTMENT
BROKER TO SUPPLY CARRIER WITH ATTACHED MSDS AND BULK TAGS. CONTACT KEITH
GUIDROZ AT AT 504-887-8897 AND HE WILL SET UP DELIVERY WITH TRIPLE E TRANSPORT.

CC: CEDAR CHEMICAL CORP
XX, LOG, AV, JB

JENNIFER HOLUB (JH)
412-777-2158



FRITZ COMPANIES, INC.
101 DELTA DRIVE/SUITE 8
ST. ROSE, LA 70087
FAX: 504-466-4322

Bayer Corporation
100 Bayer Road
Pittsburgh, PA 15205-8741
Phone: 412 777-2000

DECEMBER 04, 1997

BAYER ORDER # : 06Y63646
CUSTOMER : CEDAR CHEMICAL CORP
CUSTOMER PO :
VESSEL : GALVESTON BAY
BL # : STOLT SNN972276
CONTAINER # : SNIU121059-9
NET WGT : 19080.00 KG
PORT OF LOADING : ROTTERDAM
PORT OF ARRIVAL : NEW ORLEANS

ARRIVAL DATE : 12/19/97

11/28/97

ENCLOSED, PLEASE FIND DOCUMENTS PERTAINING TO THE FOLLOWING.

1 TANK CONTAINER(S) OF 3,4 DICHLOROANILINE, PURE (N826 99)

MAKE I.D. ENTRY IN THE NAME OF BAYER CORPORATION (IMPORTER'S # 26-1339219BU)

TRANSACTION BETWEEN RELATED PARTIES

ENTER WITH U. S. CUSTOMS AS :

E.S. # : 2921.42.2300
RATE : 1.70¢ / KG + 15.10 %
CAS # : NOT REQUIRED
POSITIVE TSCA CERTIFICATION REQUIRED

PLEASE ISSUE DELIVERY ORDER(S) TO :

CARRIER TO BE ADVISED

SHIP ON A COLLECT BASIS TO :

CEDAR CHEMICAL CORP
HIGHWAY 242
WEST HELENA, AR 72390

INLAND BILL OF LADING ATTACHED

SPECIAL INSTRUCTIONS :

NOTE ON DELIVERY ORDER: CARRIER TO CALL FOR DELIVERY APPOINTMENT
BROKER TO SUPPLY CARRIER WITH ATTACHED MSDS AND BULK TAGS. CONTACT KEITH
GUIDROZ AT 504-887-8897 HE WILL SET UP DELIVERY WITH TRIPLE E TRANSPORT.

CC: CEDAR CHEMICAL CORP
XX, LOG, AV JB

JENNIFER HOLUB (JH)
412-777-2158



BAYER AG
SF CENTRALE ANALYTIK

CERTIFICATE OF ANALYSIS

061/062
PAGE 1 END
DATE 25.11.97

WERK LEVERKUSEN

BAYER CORPORATION

ATTN: A. VANDATTA
100 BAYER ROAD
PITTSBURGH PA 15205-9741
USA

ARTICLE: 3,4-DICHLOROANILINE LIQUID MCL 163.0
ART-NO.: 02 00734156

SAMPLE-NO. / BATCH-NO. / WORK-ORDER-NO. / PURCHASE-ORDER-NO. / QUANTITY (KG)
416562-0 / 0802927D7 / 00802527D7 / (SEE MARKS) / 19520

DATE OF RELEASE: 24.11.97

SAMPLE WAS TAKEN ACC. TO COMPANY STAND. AND TESTED WITH THE FOLLOWING RESULT:

TEST	RESULT	UNIT	REQUIREMENT	
			MIN	MAX
APPEARANCE	COMPLIES		MUST COMPLY	
ASSAY (GAS CHROMATOGRAPHY)	99.5	%	99	
WATER (K. FISCHER):	0.02	%		0.1
3,4,5,6'-TETRACHLOROANILINE	<1	MG/KG		50

MARKS:

BAYER
04-087455
NEW ORLEANS
06Y63645 M826
3,4 DICHLOROANILINE, PURE
GROSS 21600 KG
NET 19520 KG
MADE IN GERMANY

CONTAINER-NO.:
SHTUL21050-3

[Signature]
DR. KOEHL



BAYER AG
KF ZENTRALE ANALYTIK

CERTIFICATE OF ANALYSIS

061/062
PAGE 1 END
DATE 04.12.97

WERK LEVERKUSEN

BAYER CORPORATION

ATTN. A. VANBASTA
100 BAYER ROAD
PITTSBURGH PA 15205-9741
USA

ARTICLE: 3,4-DICHLOROANILINE LIQUID MOL. 162.0
ART-NO.: 02 00734156

SAMPLE-NO. | BATCH-NO. | WORK-ORDER-NO. | PURCHASE-ORDER-NO. | QUANTITY (KG)
416620-0 | 0802528B7 | 00802528B7 | (SEE MARKS) | 19080

DATE OF RELEASE: 04.12.97

SAMPLE WAS TAKEN ACC. TO COMPANY STAND. AND TESTED WITH THE FOLLOWING RESULT:

TEST	RESULT	UNIT	REQUIREMENT	
			MIN	MAX
APPEARANCE	COMPLIES		MUST COMPLY	
ASSAY (GAS CHROMATOGRAPHY)	99.6	%	99	
WATER (K.FISCHER)	0.03	%	0.1	
3,4,5'-TETRACHLOROAROBENZENE	1	MG/RS	50	

MARKS:

BAYER
04-087455
NEW ORLEANS
06Y63646 N826
3,4 DICHLOROANILINE, PURE
GROSS NG
NET 19080 NG
MADE IN GERMANY

CONTAINER-NO.:
SMIUL21059-9

N. Schmidt
DR. SCHMIDT

RAW MATERIAL RECEIVING RECORD

№ 11089

CEDAR CHEMICAL 9000-1 REV: C

TIME IN AT GATE
04 30

RECEIVED BY
DL

SECTION 1

DATE	ORDER NO.	CAR OR TRUCK NO.	DECLARED WEIGHT
1/12/98	04-087455	SNU121059-9	Net NA 42064

SHIPPER	CARRIER
<i>Rager</i>	<i>Triple E</i>

QUANTITY	CONTAINER	DESTINATION	RAW MAT CODE #	DESCRIPTION
1	S/C	unit 6	3020	DCA

COMMENTS
C of A was faxed

SECTION 2

RECIPIENT	TIME SAMPLE/CERTIFICATE TAKEN TO LAB
<i>M. Lab</i>	5:00

UNLOADED AT (tank number, unit, warehouse, etc.)
dropped at unit 6 will be unloaded when hot

COMMENTS

SECTION 3

LAB TECHNICIAN	ACCEPT	REJECT	REASON FOR REJECTION
<i>EP</i>	✓		

COMMENTS

SECTION 4

LAB SUPERVISOR	ACCEPT	REJECT	REASON FOR REJECTION
<i>M. Lab</i>	✗		

PLANT WEIGHT	UNLOADING TIMES	
NET	START TIME	END TIME

COMMENTS

RAW MATERIAL RECEIVING RECORD

No. 11090

CEDAR CHEMICAL 9000-1 REV: C

TIME IN AT GATE 0420	SECTION 1	RECEIVED BY DLW
--------------------------------	-----------	---------------------------

DATE	ORDER NO.	CAR OR TRUCK NO.	DECLARED WEIGHT
1/12/98	04-087455	SN110121052-3	Net NA 43034

SHIPPER Bayen	CARRIER Triple E
-------------------------	----------------------------

QUANTITY	CONTAINER	DESTINATION	RAW MAT CODE #	DESCRIPTION
1	S/C	unit 6	3020	DCA

COMMENTS
C of A was filed

SECTION 2	
RECIPIENT	TIME SAMPLE/CERTIFICATE TAKEN TO LAB
Meal	5:00

UNLOADED AT (tank number, unit, warehouse, etc.)
dumped at unit 6 will be reloaded when hot

COMMENTS

SECTION 3			
LAB TECHNICIAN	ACCEPT	REJECT	REASON FOR REJECTION
FB	<input checked="" type="checkbox"/>		

COMMENTS

SECTION 4			
SHIFT SUPERVISOR	ACCEPT	REJECT	REASON FOR REJECTION
Meal	<input checked="" type="checkbox"/>		

PLANT WEIGHT	UNLOADING TIMES	
NET	START TIME	END TIME

COMMENTS



Telefax
**Industrial Chemicals Division
Organic Chemicals**

Date:	<u>12 / 23 / 97</u>	Pages:	<u>2</u>
To:	<u>Bob Christian</u>	From:	<u>Andy Vannatta</u>
Company:	<u>CEDAR</u>	Company:	<u>Organic Chemicals</u>
Fax:	<u>9-1-870-572-3795</u>	Fax:	<u>(412) 777-4109</u>
Phone:	<u>9-1-870-572-3701 X227</u>	Phone:	<u>(412) 777-2512</u>
cc:	<u>Keith Guldroz 504-887-8898</u> <u>(Broker's Instructions Only)</u>		

Re: 3,4-DICHLOROANILINE

We are attaching brokers instructions and analysis covering ONE
 container(s) of 3,4-DCA, arriving on the N.L. Holland.
 Container number (s) UTC451009-5 Our reference number (s) 06x 6-3647

NOTICE OF CONFIDENTIALITY

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FRITZ COMPANIES, INC.
101 DELTA DRIVE/SUITE 5
ST. ROSE, LA 70087
FAX: 504-466-4322

Bayer Corporation
100 Bayer Road
Pittsburgh, PA 15205-0741
Phone: 412 777-2000

DECEMBER 10, 1997

BAYER ORDER # : 06Y63647
CUSTOMER : CEDAR CHEMICAL CORP
CUSTOMER PO :
VESSEL : NL HOLLAND
BL # : STOLT SNN 972321
CONTAINER # : UTCU457009-6
NEP WGT : 19500.00 KG
PORT OF LOADING : ROTTERDAM
PORT OF ARRIVAL : NEW ORLEANS

ARRIVAL DATE : 12/26/97

12/05/97

ENCLOSED, PLEASE FIND DOCUMENTS PERTAINING TO THE FOLLOWING.

1 TANK CONTAINER(S) OF 3,4 DICHLOROANILINE, PURE (N826 99)

MAKE I.D. ENTRY IN THE NAME OF BAYER CORPORATION (IMPORTER'S # 25-1339219BU)

TRANSACTION BETWEEN RELATED PARTIES

ENTER WITH U. S. CUSTOMS AS :

H.S. # : 2921.42.2300
RATE : 1.70¢ / KG + 15.10 %
CAS # : NOT REQUIRED
POSITIVE TSCA CERTIFICATION REQUIRED

PLEASE ISSUE DELIVERY ORDER(S) TO :

CARRIER TO BE ADVISED

SHIP ON A COLLECT BASIS TO :

CEDAR CHEMICAL CORP
HIGHWAY 242
WEST HELENA, AR 72390

INLAND BILL OF LADING ATTACHED

SPECIAL INSTRUCTIONS :

NOTE ON DELIVERY ORDER: CARRIER TO CALL FOR DELIVERY APPOINTMENT
BROKER TO SUPPLY CARRIER WITH ATTACHED MSDS AND BULK TAGS
USE TRIPLE X TRANSPORT

CC: CEDAR CHEMICAL CORP
XX, LOG, JB, AV

JENNIFER HOLUB (JH)
412-777-2158



BAYER AG
KF ZENTRALE ANALYTIK

CERTIFICATE OF ANALYSIS

061/062
PAGE 1 END
DATE 16.12.97

WERK LEVERKUSEN

BAYER CORPORATION

APFN. A. VANMETER
100 BAYER ROAD
PITTSBURGH PA 15206-9741
USA

ARTICLE: 3,4-DICHLOROANILINE LIQUID MOL 162.0

ART-NO.: 02 00734156

SAMPLE-NO. / BATCH-NO. : WORK-ORDER-NO. / PURCHASE-ORDER-NO. / QUANTITY (KG)
416633-0 / D0574 : 00802529L7 : (SEE MARKS) : 20000

DATE OF RELEASE: 15.12.97

SAMPLE WAS TAKEN ACC. TO COMPANY STAND. AND TESTED WITH THE FOLLOWING RESULT:

TEST	RESULT	UNIT	REQUIREMENT	
			MIN	MAX
APPEARANCE	COMPLIES		MUST COMPLY	
ASSAY (GAS CHROMATOGRAPHY)	99.7	%	99	
WATER (K. FISCHER)	0.01	%		0.1
3,4,3',4'-TETRACHLOROANILINE	MN<1	MG/KG		50
BN = NOT DETECTABLE				

MARKS:

BAYER
04-087455
NEW ORLEANS
05Y63647 N826
3,4 DICHLOROANILINE, PURE
GROSS KG
NET 20000 KG
MADE IN GERMANY

CONTAINER-NO.:
UTC0457009-6

N. Lay
DR. SIEMENS

RAW MATERIAL RECEIVING RECORD

No 11130

CEDAR CHEMICAL 9000-1 REV: C

TIME IN AT GATE
1222

RECEIVED BY
J. Williams

SECTION 1

DATE	ORDER NO.	CARRIER/TRUCK NO.	DECLARED WEIGHT
------	-----------	-------------------	-----------------

1-18-98	04-087455	UTC 457009-6	Net N/A 42990
---------	-----------	--------------	---------------

SHIPPER	CARRIER
Bayer	Triple E

QUANTITY	CONTAINER	DESTINATION	RAW MAT CODE #	DESCRIPTION
1	S/C	unit 6	3020	DCA

COMMENTS
C. O. A. in LAB

SECTION 2

RECIPIENT	TIME SAMPLE/CERTIFICATE TAKEN TO LAB
-----------	--------------------------------------

Richard S. Becher	12:40
-------------------	-------

UNLOADED AT (tank number, unit, warehouse, etc.)
T-206211

COMMENTS

SECTION 3

LAB TECHNICIAN	ACCEPT	REJECT	REASON FOR REJECTION
----------------	--------	--------	----------------------

PF	V		
----	---	--	--

COMMENTS
COA 99.7% ; H₂O .01

SECTION 4

SHIFT SUPERVISOR	ACCEPT	REJECT	REASON FOR REJECTION
------------------	--------	--------	----------------------

--	--	--	--

PLANT WEIGHT	UNLOADING TIMES	
NET	START TIME	END TIME

COMMENTS



Telefax

Industrial Chemicals Division
Organic Chemicals

Date: 12/23/97

Pages: 6

To: Bob Christian

From: Andy Vannatta

Company: CEDAR

Company: Organic Chemicals

Fax: 9-1-870-572-3795

Fax: (412) 777-4109

Phone: 9-1-870-572-3701 X227

Phone: (412) 777-2512

cc: Keith Guidroz 504-887-8898
(Broker's Instructions Only)

Re: **3,4-DICHLOROANILINE**

We are attaching brokers instructions and analysis covering three
container(s) of 3,4-DCA, arriving on the Murka Leon on 1/3/98
Container number (s) SM34121323-0 Our reference number (s) 0475698
SM34121279-7 04768447
SM3412110-5 04757650

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CUSTOMER : CEDAR CHEMICAL CORP
SNIU121110-5
01/03/98
CUSTOMER PO: 04-087455

NUEVO LEON
STOLT SNN972349
NET: 20160.00 KG

Bayer Corporation
100 Bayer Road
Pittsburgh, PA 15205-9741
Phone: 412 777-2000

BAYER PO# : 06Y63650 PRODUCT : N826 CONT CD : 99 NWGT : 20160.00 KG

1 TANK CONTAINER(S) OF 3,4 DICHLOROANILINE, PURE

H.S. # : 2921.42.2300
RATE : 1.70¢ / KG + 15.10 %
CAS # : NOT REQUIRED
POSITIVE TSCA CERTIFICATION REQUIRED

CUSTOMER : CEDAR CHEMICAL CORP
SNIU121279-7
01/03/98
CUSTOMER PO: 04-087455

NUEVO LEON
STOLT SNN972349
NET: 19540.00 KG

BAYER PO# : 06Y63649 PRODUCT : N826 CONT CD : 99 NWGT : 19540.00 KG

1 TANK CONTAINER(S) OF 3,4 DICHLOROANILINE, PURE

H.S. # : 2921.42.2300
RATE : 1.70¢ / KG + 15.10 %
CAS # : NOT REQUIRED
POSITIVE TSCA CERTIFICATION REQUIRED

CUSTOMER : CEDAR CHEMICAL CORP
SNIU121333-0
01/03/98
CUSTOMER PO: 04-087455

NUEVO LEON
STOLT SNN972349
NET: 20040.00 KG

BAYER PO# : 06Y63648 PRODUCT : N826 CONT CD : 99 NWGT : 20040.00 KG

1 TANK CONTAINER(S) OF 3,4 DICHLOROANILINE, PURE

H.S. # : 2921.42.2300
RATE : 1.70¢ / KG + 15.10 %
CAS # : NOT REQUIRED
POSITIVE TSCA CERTIFICATION REQUIRED



FRITZ COMPANIES, INC.
101 DELTA DRIVE/SUITE 9
ST. ROSE, LA 70087
FAX: 504-466-4322

Bayer Corporation
100 Bayer Road
Pittsburgh, PA 15205-9741
Phone: 412 777-2000

DECEMBER 12, 1997

BAYER ORDER # : SEE ATTACHED
CUSTOMER : CEDAR CHEMICAL CORP
CUSTOMER PO : SEE ATTACHED
VESSEL : NUEVO LEON
BL # : STOLT SNN972349
CONTAINER # : SEE ATTACHED
NET WGT : SEE ATTACHED
PORT OF LOADING : ROTTERDAM
PORT OF ARRIVAL : NEW ORLEANS

ARRIVAL DATE : 01/03/98

12/08/97

ENCLOSED, PLEASE FIND DOCUMENTS PERTAINING TO THE FOLLOWING.

SEE ATTACHED

MAKE I.D. ENTRY IN THE NAME OF BAYER CORPORATION (IMPORTER'S # 25-1339219BU)
TRANSACTION BETWEEN RELATED PARTIES

ENTER WITH U. S. CUSTOMS AS :
B.S. # : SEE ATTACHED
RATE : SEE ATTACHED
CAS # : SEE ATTACHED

PLEASE ISSUE DELIVERY ORDER(S) TO : CARRIER TO BE ADVISED

SHIP ON A COLLECT BASIS TO :
CEDAR CHEMICAL CORP
HIGHWAY 242
WEST HELENA, AR 72390

INLAND BILL OF LADING ATTACHED

SPECIAL INSTRUCTIONS :
NOTE ON DELIVERY ORDER: CARRIER TO CALL FOR DELIVERY APPOINTMENT
BROKER TO SUPPLY CARRIER WITH ATTACHED MSDS AND BULK TAGS
USE TRIPLE E TRANSPORT - PLEASE EXPEDITE

CC: CEDAR CHEMICAL CORP
XX, LOG, JB, AV

JENNIFER HOLUB (JH)
412-777-2158

--ATTACHMENTS--



BAYER AG
ZF ZENTRALE ANALYTIK

CERTIFICATE OF ANALYSIS

061/062
PAGE 1 END
DATE 03.12.97

WERK LEVERKUSEN

BAYER CORPORATION

ATTN. A. VAMNATTA
100 BAYER ROAD
PITTSBURGH PA 15205-9741
USA

ARTICLE: 3,4-DICHLOROANILIN LIQUID MOL 162.0
ART-NO.: 02 00734156

SAMPLE-NO. | BATCH-NO. | WORK-ORDER-NO. | PURCHASE-ORDER-NO. | QUANTITY (KG)
416669-0 | D0586 | 00802530D7 | (SEE MARKS) | 20000

DATE OF RELEASE: 03.12.97

SAMPLE WAS TAKEN ACC. TO COMPANY STAND. AND TESTED WITH THE FOLLOWING RESULT:

TEST	RESULT	UNIT	REQUIREMENT	
			MIN	MAX
APPEARANCE	COMPLIES		MUST COMPLY	
ASSAY (GAS CHROMATOGRAPHY)	99.7	%	99	
WATER (K.FISCHER)	0.02	%	0.1	
3,4,3',4'-TETRACHLOROAZOBENZENE	2	MG/KG	50	

MARKS:

BAYER
04-087455
NEW ORLEANS
06Y63648 NB26
3,4 DICHLOROANILIN, PURE
GROSS KG
NET 20000 KG
MADE IN GERMANY

CONTAINER-NO.:
BN10121333-0

W. Steinhardt
DR. STEINHARDT



BAYER AG
ZF ZENTRALE ANALYTIK

CERTIFICATE OF ANALYSIS

061/062
PAGE 1 END
DATE 05.12.97

WERK LEVERKUSEN

BAYER CORPORATION

ATTN. A. VAMNATHA
100 BAYER ROAD
PITTSBURGH PA 15205-9741
USA

ARTICLE: 3,4-DICHLOROANILINE LIQUID MOL 162.0
ART-NO.: 02 00734156

SAMPLE-NO.	BATCH-NO.	WORK-ORDER-NO.	PURCHASE-ORDER-NO.	QUANTITY (KG)
416680-0	0802531E7	00802531E7	(SEE MARKS)	20000.

DATE OF RELEASE: 05.12.97

SAMPLE WAS TAKEN ACC. TO COMPANY STAND. AND TESTED WITH THE FOLLOWING RESULT:

TEST	RESULT	UNIT	REQUIREMENT	
			MIN	MAX
APPEARANCE	COMPLIES		MUST COMPLY	
ASSAY (GAS CHROMATOGRAPHY)	99.7	%	99	
WATER (K.FISCHER)	<0.01	%	0.1	
3,4,3',4'-TETRACHLOROAZOBENZENE	<1	MG/KG	50	

MARKS:

BAYER
04-087455
NEW ORLEANS
06Y63649 N826
3,4 DICHLOROANILINE, PURE
GROSS KG
NET 20000 KG
MADE IN GERMANY

CONTAINER-NO.:
SNIUL21279-7

J. V. Van
DR. SIEWERDT



BAYER AG
ZF ZENTRALE ANALYTIK

CERTIFICATE OF ANALYSIS

061/062
PAGE 1 END
DATE 05.12.97

WERK LEVERKUSEN

BAYER CORPORATION

ATTN: A. VANRATTA
100 BAYER ROAD
PITTSBURGH PA 15205-9741
USA

ARTICLE: 3,4-DICHLOROANILINE LIQUID MOL 162.0
ART-NO.: 02 00734156

SAMPLE-NO.	BATCH-NO.	WORK-ORDER-NO.	PURCHASE-ORDER-NO.	QUANTITY (KG)
416694-0	0802832L7	00802832L7	(SEE MARKS)	20160

DATE OF RELEASE: 05.12.97

SAMPLE WAS TAKEN ACC. TO COMPANY STAND. AND TESTED WITH THE FOLLOWING RESULT:

TEST	RESULT	UNIT	REQUIREMENT	
			MIN	MAX
APPEARANCE	COMPLIES		MUST COMPLY	
ASSAY (GAS CHROMATOGRAPHY)	99.7	%	99	
WATER (K. FISCHER)	0.02	%	0.1	
3,4,3',4'-TETRACHLOROAZOBENZENE	<1	MG/KG	50	

MARKS:

BAYER
04-087455
NEW ORLEANS
06Y63650 N826
3,4 DICHLOROANILINE, PURE
GROSS KG
NET 20160 KG
MADE IN GERMANY

CONTAINER-NO.:
SNTU121110-5

N. Siewerdt
DR. SIEWERDT

RAW MATERIAL RECEIVING RECORD

№ 11063

CEDAR CHEMICAL 9000-1 REV: C

TIME IN AT GATE
0620

RECEIVED BY
Dw

SECTION 1

DATE: 1/9/98 ORDER NO: 04-087455 CAR/OR TRUCK NO: SNIU121333-0 DECLARED WEIGHT: Net NA 44092

SHIPPER: Bayer

CARRIER: Triple E

QUANTITY	CONTAINER	DESTINATION	RAW MAT CODE #	DESCRIPTION
1	S/C	unit 6	40100	DCA

COMMENTS: C of A was faked

SECTION 2

RECIPIENT: J.D. Knight TIME SAMPLE/CERTIFICATE TAKEN TO LAB: 07.50

UNLOADED AT (tank number, unit, warehouse, etc.):

COMMENTS: Dropped at T6211 To unload at a later date

SECTION 3

LAB TECHNICIAN: *[Signature]* ACCEPT: REJECT: REASON FOR REJECTION:

COMMENTS: DCA 99.7
H2O .02

SECTION 4

SHIP SUPERVISOR: *[Signature]* ACCEPT: REJECT: REASON FOR REJECTION:

PLANT WEIGHT: NET UNLOADING TIMES: START TIME: 1-9-98 0805 END TIME:

COMMENTS:

RAW MATERIAL RECEIVING RECORD

No 11062

CEDAR CHEMICAL 9000-1 REV: C

TIME IN AT GATE
0620

RECEIVED BY
DW

SECTION 1

DATE: 1/9/98 ORDER NO: 04-087455 CAR OF TRUCK NO: \$N U 12 1110-5 DECLARED WEIGHT: Net NA 44445

SHIPPER
Bayer

CARRIER
Triple E

QUANTITY	CONTAINER	DESTINATION	RAW MAT CODE #	DESCRIPTION
1	S/C	unit 6	40100	DCA

COMMENTS
C of A was faxed

SECTION 2

RECIPIENT: A.J. Knight TIME SAMPLE/CERTIFICATE TAKEN TO LAB: 07:50

UNLOADED AT (tank number, unit, warehouse, etc.)

COMMENTS
Dumped at T 6211 To unload at a later date

SECTION 3

LAB TECHNICIAN: *WJ* ACCEPT: REJECT: REASON FOR REJECTION:

COMMENTS
DCA 99.7
H2O .02

SECTION 4

SHIFT SUPERVISOR: McBride ACCEPT: REJECT: REASON FOR REJECTION:

PLANT WEIGHT: NET UNLOADING TIMES: START TIME: 0800 END TIME:

COMMENTS

RAW MATERIAL RECEIVING RECORD

No 11129

CEDAR CHEMICAL 9000-1 REV: C

TIME IN AT GATE
1200

RECEIVED BY
H. Williams

SECTION 1

DATE	ORDER NO.	CAR OR TRUCK NO.	DEGROSS WEIGHT
1-18-98	04-087465	SNIU121279-7	Net NIA 43078

SHIPPER	CARRIER
<i>Bayer</i>	<i>Tropic</i>

QUANTITY	CONTAINER	DESTINATION	RAW MAT CODE #	DESCRIPTION
1	5/C	unit 6	3020	DCA

COMMENTS
C. O. A. in LAB

SECTION 2

RECIPIENT	TIME SAMPLE CERTIFICATE TAKEN TO LAB
<i>Arthur A. Dwyer</i>	12:15

UNLOADED AT (tank number, unit, warehouse, etc.)
T-6210

COMMENTS

SECTION 3

LAB TECHNICIAN	ACCEPT	REJECT	REASON FOR REJECTION
<i>PF</i>	✓		

COMMENTS
COA 99.7%, .01% C.

SECTION 4

SHIFT SUPERVISOR	ACCEPT	REJECT	REASON FOR REJECTION

PLANT WEIGHT	UNLOADING TIMES	
NET	START TIME	END TIME

COMMENTS



Telefax

**Industrial Chemicals Division
Organic Chemicals**

Date:	<u>1/19/98</u>	Pages:	<u>3</u>
To:	<u>Bob Christian</u>	From:	<u>Andy Vannatta</u>
Company:	<u>CEDAR</u>	Company:	<u>Organic Chemicals</u>
Fax:	<u>9-1-870-572-3795</u>	Fax:	<u>(412) 777-4109</u>
Phone:	<u>9-1-870-572-3701 X227</u>	Phone:	<u>(412) 777-2512</u>
cc:	<u>Kelth Guidroz 504-887-8898 (Broker's Instructions Only)</u>		

Re: 3,4-DICHLOROANILINE

We are attaching brokers instructions and analysis covering one
^{that arrived}
 container(s) of 3,4-DCA, ~~arriving~~ on the TMM Mexico on 1/9/98
 Container number (s) SMTU121127-6 Our reference number (s) 06963654

NOTICE OF CONFIDENTIALITY

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FRITZ COMPANIES, INC
100 Bayer Road
RP2
Pittsburgh, PA 15205-9741
412/788-8642

Organic Chemicals

Bayer Corporation
100 Bayer Road
Pittsburgh, PA 15205-9741
Phone: 412 777-2000

1/13/98

File No: 148
Broker No:
Bayer Ref: 06Y63651
Arrival Port ~~NEWARK~~ *New Orleans* ETA: 1/9/98
Vessel: TMM MEXICO
B/L No: STOLT SNN972380
Container: *SMIU 121127-6*
Gross Wt.: 22520 Kg. Net Wt.: 19240 Kg.

Please make ID Entry in the name of Bayer Corporation, IRS NO: 25-1339219BU.. Transaction between RELATED parties.
(Fritz Fast Number: 5711488)

SEE ATTACHMENT.

Please issue delivery orders to:

CARRIER TO BE ADVISED

Ship on a COLLECT basis to:

CEDAR CHEMICAL CORP
HIGHWAY 242
WEST HELENA, AR 72390
PO: 04-087455
PHONE:
FAX:
Attention:

Special Instructions: BROKER TO SUPPLY CARRIER WITH ATTACHED MSDS AND BULK TAGS.
CONTACT KEITH GUIDROZ AT 504-887-8897 TO SET UP DELIVERY WITH TRIPLE E TRANSPORT.

NOTE ON DELIVERY ORDER: Delivery Order paperwork must reference Bayer P.O.# 06Y63651
/Customer P.O.# 04-087455. Carrier must call for delivery appointment at . Delivery Hours:
Emergency Contact: Chemtec 800-424-9300 International 703-527-3887

Carrier to bill:
Bayer Corporation
100 Bayer Road
Pittsburgh, PA 15205-9741
Freight Payment Dept.

Thank you!

Jennifer Holub
412-777-2158

cc: XKLOGAVFC

LOG.XX



BAYER AG
ZF ZENTRALE ANALYTIK
WERK LEVERKUSEN

CERTIFICATE OF ANALYSIS

061/062
PAGE 1 END
DATE 16.12.97

BAYER CORPORATION

ATTN. A. VANBATER
100 BAYER ROAD
PITTSBURGH PA 15205-8741
USA

ARTICLE: 3,4-DICHLOROANILINE LIQUID MOL 162.0
ART-NO.: 02 00734156

SAMPLE-NO. | BATCH-NO. | WORK-ORDER-NO. | PURCHASE-ORDER-NO. | QUANTITY (KG)
416758-0 | 080253317 | 080253317 | (SEE MARKS) | 19240

DATE OF RELEASE: 15.12.97

SAMPLE WAS TAKEN ACC. TO COMPANY STAND. AND TESTED WITH THE FOLLOWING RESULT:

TEST	RESULT	UNIT	REQUIREMENT	
			MIN	MAX
APPEARANCE	COMPLIES		MUST COMPLY	
ASSAY (GAS CHROMATOGRAPHY)	99.9	%	99	
WATER (K.FISCHER)	0.02	%		0.1
3,4,3',4'-TETRACHLOROBENZENE	RM-1	MG/KG		50
RM = NOT DETECTABLE				

MARKS:

BAYER
04-087455
NEW ORLEANS
06Y63651 N826
3,4 DICHLOROANILINE, PURE
GROSS KG
NET 19240 KG
MADE IN GERMANY

CONTAINER-NO.:
851021127-6

[Signature]
DR. STEINERT

RAW MATERIAL RECEIVING RECORD

No 11169

CEDAR CHEMICAL 9000-1 REV: C

TIME IN AT GATE
1450

RECEIVED BY
B. Mc...

SECTION 1

DATE	ORDER NO	CAR OR TRUCKING	DECLARED WEIGHT
1-24-98	D4-D87455	Sea Cont # SMTU-1211876	Net 42416

SHIPPER	CARRIER
Bayer	Triple E

QUANTITY	CONTAINER	DESTINATION	RAW MAT CODE #	DESCRIPTION
1	S/c	Unit #6	3020	DCA

COMMENTS
Cof A in Cedar Lab. per T. Peppers

SECTION 2

RECIPIENT	TIME SAMPLE/CERTIFICATE TAKEN TO LAB
<i>A J Knight</i>	1505

UNLOADED AT (tank number, unit, warehouse, etc.)

COMMENTS
To be unloaded LATER

SECTION 3

LAB TECHNICIAN	ACCEPT	REJECT	REASON FOR REJECTION
<i>TLP</i>	<input checked="" type="checkbox"/>		

COMMENTS

SECTION 4

SHIP SUPERVISOR	ACCEPT	REJECT	REASON FOR REJECTION
<i>D. Vard</i>	<input checked="" type="checkbox"/>		

PLANT WEIGHT	UNLOADING TIMES	
NET	START TIME	END TIME
	1-24-98 15:20	

COMMENTS



Telefax

**Industrial Chemicals Division
Organic Chemicals**

Date:	<u>1/19/98</u>	Pages:	<u>3</u>
To:	<u>Bob Christian</u>	From:	<u>Andy Vannatta</u>
Company:	<u>CIDAR</u>	Company:	<u>Organic Chemicals</u>
Fax:	<u>9-1-870-572-3795</u>	Fax:	<u>(412) 777-4109</u>
Phone:	<u>9-1-870-572-3701 X227</u>	Phone:	<u>(412) 777-2512</u>
cc:	<u>Kelth Guidroz 504-887-8898 (Broker's Instructions Only)</u>		

Re: 3,4-DICHLOROANILINE

We are attaching brokers instructions and analysis covering ONE
That Arrived
 container(s) of 3,4-DCA, ~~arriving~~ on the TMM Mexico 1/9/98
 Container number (s) UTC4457000-7 Our reference number (s) 06/10/98

NOTICE OF CONFIDENTIALITY

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FRITZ COMPANIES, INC
100 Bayer Road
RP2
Pittsburgh, PA 15205-9741
412/788-8642

Organic Chemicals

Bayer Corporation
100 Bayer Road
Pittsburgh, PA 15205-9741
Phone: 412 777-3000

1/19/98

File No: 150
Broker No:
Bayer Ref: 06Y63652 *New Orleans*
Arrival Port: NEW YORK *ETA: 1/19/98*
Vessel: TMM MEXICO
B/L No: STOLT SNN972380
Container: *UFCU 457000-7*
Gross Wt.: 24100 Kg. Net Wt.: 20300 Kg.

Please make ID Entry in the name of Bayer Corporation, IRS NO: 25-1339219BU. Transaction between RELATED parties.
(Fritz Fast Number: 9711488)

SEE ATTACHMENT.

Please issue delivery orders to:

CARRIER TO BE ADVISED

Ship on a COLLECT basis to:

CEDAR CHEMICAL CORP
HIGHWAY 242
WEST HELENA, AR 72390
PO: 04-087455
PHONE:
FAX:
Attention:

Special Instructions: BROKER TO SUPPLY CARRIER WITH ATTACHED MSDS AND BULK TAGS.
CONTACT KEITH GUIDROZ AT 504-887-9897 TO SET UP DELIVERY WITH TRIPLE B TRANSPORT.

NOTE ON DELIVERY ORDER: Delivery Order paperwork must reference Bayer P.O.# 06Y63652
/Customer P.O.# 04-087455. Carrier must call for delivery appointment at . Delivery Hours:
Emergency Contact: Chemtree 800-424-9300 International 703-527-3887

Carrier to bill:
Bayer Corporation
100 Bayer Road
Pittsburgh, PA 15205-9741
Freight Payment Dept.

Thank you!

Jennifer Holub
412-777-2158

cc: *XX* LOGAVPC

LOGXX



BAYER AG
 BV CENTRALE ANALYTIK

CERTIFICATE OF ANALYSIS

051/053
 PAGE 1 END
 DATE 16.12.97

WERK LEVERKUSEN

BAYER CORPORATION

ATTN: A. VANDER
 100 BAYER ROAD
 PITTSBURGH PA 15205-9741
 USA

ARTICLE: 3,4-DICHLOROANILINE LIQUID MOL 162.0
 ART-NO.: 02 00724156

SAMPLE-NO. | BATCH-NO. | WORK-ORDER-NO. | PURCHASE-ORDER-NO. | QUANTITY (KG)
 416750-0 | 080253467 | 080253467 | (SEE MARKS) | 20300

DATE OF RELEASE: 15.12.97

SAMPLE WAS TAKEN ACC. TO COMPANY STAND. AND TESTED WITH THE FOLLOWING RESULT:

TEST	RESULT	UNIT	REQUIREMENT	
			MIN	MAX
APPEARANCE	COMPLIES		MUST COMPLY	
ASSAY (GAS CHROMATOGRAPHY)	99.8	%	99	
WATER (K.FISCHER)	0.01	%		0.1
3,4,3',4'-TETRACHLOROANILINE	<1	MG/KG		50

MARKS:

BAYER
 04-087455
 NEW ORLEANS,
 05Y6352 NB26
 3,4 DICHLOROANILINE, PURE
 GROSS KG
 NET 20300 KG
 MADE IN GERMANY

Container No:
 UTCU457000-7

V. Lind
 DR. SLEWEDT

RAW MATERIAL RECEIVING RECORD

No. 11165

CEDAR CHEMICAL 9000-1 REV: C

TIME IN AT GATE
07:30

RECEIVED BY
DL

SECTION 1

DATE	ORDER NO	CARBON TRUCKING NO	DECLARED WEIGHT
<i>1/24/98</i>	<i>04-027455</i>	<i>UTCU4570007-</i>	Net <i>44753</i>

SHIPPER	CARRIER
<i>Bayer</i>	<i>Tribe E</i>

QUANTITY	CONTAINER	DESTINATION	RAW MAT CODE #	DESCRIPTION
<i>1</i>	<i>S/C</i>	<i>unit 6</i>	<i>3020</i>	<i>DCA</i>

COMMENTS
C of A was faked

SECTION 2

RECIPIENT	TIME SAMPLE/CERTIFICATE TAKEN TO LAB
<i>Mart</i>	<i>9:00</i>

UNLOADED AT (tank number, unit, warehouse, etc.)
unit 6 will be unloaded into T6210 or T6211

COMMENTS
each one will be app

SECTION 3

LAB TECHNICIAN	ACCEPT	REJECT	REASON FOR REJECTION
<i>FD</i>	<input checked="" type="checkbox"/>		

COMMENTS

SECTION 4

SHIFT SUPERVISOR	ACCEPT	REJECT	REASON FOR REJECTION
<i>Shiel</i>	<input checked="" type="checkbox"/>		

PLANT WEIGHT	UNLOADING TIMES	
NET	START TIME	END TIME

COMMENTS
cont was dropped in unit



Telefax
**Industrial Chemicals Division
Organic Chemicals**
Date: 1/13/98Pages: 5To: Bob ChristianFrom: Andy VannottaCompany: CEDARCompany: Organic ChemicalsFax: 9-1-870-572-3795Fax: (412) 777-4109Phone: 9-1-870-572-3701 X227Phone: (412) 777-2512cc: Kelth Guldroz 504-887-8898
(Broker's Instructions Only)**Re: 3,4-DICHLOROANILINE**We are attaching brokers instructions and analysis covering TWDcontainer(s) of 3,4-DCA, arriving on the Muernberg Express on 1/17/98
SVI4121015-6 06468653Container number (s) SVI4121092-1 Our reference number (s) 06468654**NOTICE OF CONFIDENTIALITY**

The information contained in and transmitted with this facsimile is confidential and/or exempt from disclosure under applicable law. It is intended only for the individual or entity named above. You are hereby notified that any dissemination, distribution, copying, or use of or reliance upon the information contained in and transmitted with this facsimile by or to anyone other than the recipient designated above by the sender is **UNAUTHORIZED AND STRICTLY PROHIBITED**. If you have received this facsimile in error, please immediately call Bayer Corp. collect at (412) 777-2512 so that we can arrange for the return of the original facsimile at our cost. Thank you.



FRITE COMPANIES, INC.
101 DELTA DRIVE/SUITE S
ST. ROSE, LA 70087
FAX: 504-466-4322

Bayer Corporation
100 Bayer Road
Pittsburgh, PA 15205-8741
Phone: 412 777-2000

JANUARY 02, 1998

BAYER ORDER # : SEE ATTACHED
CUSTOMER : CEDAR CHEMICAL CORP
CUSTOMER PO : SEE ATTACHED
VESSEL : NURNBERG EXPRESS
BL # : STOLF SNN972438
CONTAINER # : SEE ATTACHED
NET WGT : SEE ATTACHED
PORT OF LOADING : ROTTERDAM
PORT OF ARRIVAL : NEW ORLEANS

ARRIVAL DATE : 01/17/98

12/23/97

ENCLOSED, PLEASE FIND DOCUMENTS PERTAINING TO THE FOLLOWING.

SEE ATTACHED

MAKE I.D. ENTRY IN THE NAME OF BAYER CORPORATION (IMPORTER'S # 25-1339219BU)

TRANSACTION BETWEEN RELATED PARTIES

ENTER WITH U. S. CUSTOMS AS :

H.S. # : SEE ATTACHED
HAFB : SEE ATTACHED
CAS # : SEE ATTACHED

PLEASE ISSUE DELIVERY ORDER(S) TO :

CARRIER TO BE ADVISED

SHIP ON A COLLECT BASIS TO :

CEDAR CHEMICAL CORP
HIGHWAY 242
WEST HELENA, AR 72390

INLAND BILL OF LADING ATTACHED

SPECIAL INSTRUCTIONS :

NOTE ON DELIVERY ORDER: CARRIER TO CALL FOR DELIVERY APPOINTMENT
BROKER TO SUPPLY CARRIER WITH ATTACHED MSDS AND BULK TAGS. CONTACT KEITH
GUIDROZ AT 504-887-8897 TO SET UP DELIVERY USING TRIPLE B TRANSPORT AS THE
CARRIER.

CC: CEDAR CHEMICAL CORP
XX, LOG, AV, JB

JENNIFER HOLUB (JH)
412-777-2158

—ATTACHMENTS—



CUSTOMER : CEDAR CHEMICAL CORP
SNIU121015-6
01/17/98
CUSTOMER PO:

HJERNBERG EXPRESS
STOLT SNN972438
NET: 18800.00 KG

Bayer Corporation
100 Bayer Road
Pittsburgh, PA 15203-0741
Phone: 412 777-2000

BAYER PO# : 06Y63653 PRODUCT : N826 CONT CD : 99 NET WT : 18800.00 KG

1 TANK CONTAINER(S) OF 3,4 DICHLOROANILINE, PURE

H.S. # : 2921.42.2300
RATE : 1.40¢ / KG + 13.90 ¢
CAS # : NOT REQUIRED
POSITIVE TSCA CERTIFICATION REQUIRED

CUSTOMER : CEDAR CHEMICAL CORP
SNI0121092-1
01/17/98
CUSTOMER PO:

HJERNBERG EXPRESS
STOLT SNN972438
NET: 19000.00 KG

BAYER PO# : 06Y63654 PRODUCT : N826 CONT CD : 99 NET WT : 19000.00 KG

1 TANK CONTAINER(S) OF 3,4 DICHLOROANILINE, PURE

H.S. # : 2921.42.2300
RATE : 1.40¢ / KG + 13.90 ¢
CAS # : NOT REQUIRED
POSITIVE TSCA CERTIFICATION REQUIRED



BAYER AG
ZF ZENTRALE ANALYTIK

CERTIFICATE OF ANALYSIS

061/062
PAGE 1 END
DATE 23.12.97

WERK LEVERKUSEN

BAYER CORPORATION

ATTN: A. VANHATA
100 BAYER ROAD
PITTSBURGH PA 15205-9741
USA

ARTICLE: 3,4-DICHLORANILIN LIQUID MOL 162.0
ART-NO.: 02 00734156

SAMPLE-NO.	BATCH-NO.	WORK-ORDER-NO.	POURCHASE-ORDER-NO.	QUANTITY (KG)
416814-0	0802535E7	00802535E7	(SEE MARKS)	18800

DATE OF RELEASE: 23.12.97

SAMPLE WAS TAKEN ACC. TO COMPANY STAND. AND TESTED WITH THE FOLLOWING RESULT:

TEST	RESULT	UNIT	REQUIREMENT	
			MIN	MAX
APPEARANCE	COMPLIES		MUST COMPLY	
ASSAY (GAS CHROMATOGRAPHY)	99.7	%	99	
WATER (K. FISCHER)	0.06	%	0.1	
3,4,3',4'-TETRACHLOROAZOBENZENE	<1	MG/KG	50	
ND - NOT DETECTABLE				

MARKS:

BAYER
04-087455
NEW ORLEANS
06Y63653 N826
3,4 DICHLORANILINE, PURE
GROSS 21960 KG
NET 18800 KG
MADE IN GERMANY

CONTAINER-NO.:
8N1U121015-6

H. Sieg
MR. SIEMERT



BAYER AG
KF ZENTRALE ANALYTIK

CERTIFICATE OF ANALYSIS

061/062
PAGE 1 END
DATE 23.12.97

WERK LEVERKUSEN

BAYER CORPORATION

ATTN. A. VANHATA
100 BAYER ROAD
PITTSBURGH PA 15205-9741
USA

ARTICLE: 3,4-DICHLORANILIN LIQUID MOL 162.0

ART-NO.: 02 00734155

SAMPLE-NO.:	BATCH-NO.	WORK-ORDER-NO.:	PURCHASE-ORDER-NO.:	QUANTITY (KG)
416819-0	0802536C7	00802536C7	(SEE MARKS)	19000

DATE OF RELEASE: 23.12.97

SAMPLE WAS TAKEN ACC. TO COMPANY STAND. AND TESTED WITH THE FOLLOWING RESULT:

TEST	RESULT	UNIT	REQUIREMENT	
			MIN	MAX
APPEARANCE	COMPLIES		MUST COMPLY	
ASSAY (GAS CHROMATOGRAPHY)	99.6	%	99	
WATER (K. FISCHER)	0.04	%		0.1
3,4,3',4'-TETRACHLOROAZOBENZENE	<1	MG/KG		50
MS = NOT DETECTABLE				

MARKS:

BAYER
04-087455
NEW ORLEANS
05Y63554 NB26
3,4 DICHLORANILIN, PURE
GROSS 22160 KG
NET 19000 KG
MADE IN GERMANY

CONTAINER-NO.:
SNU0121092-1

M. Li
DR. STEWART

RAW MATERIAL RECEIVING RECORD

No 11188

CEDAR CHEMICAL 9000-1 REV: C

TIME IN AT GATE
0348

RECEIVED BY
J. Williams

SECTION 1

DATE	ORDER NO.	CAR OF TRUCK NO.	DECLARED WEIGHT
1-28-98	04-087455	SN 121092-1	Net 150041.887

SHIPPER	CARRIER
<i>Bimaru</i>	<i>Truck 2</i>

QUANTITY	CONTAINER	DESTINATION	RAW MAT CODE #	DESCRIPTION
1	SIC	<i>unit 6</i>	3020	DCA

COMMENTS
COA in TAR

SECTION 2

RECIPIENT	TIME SAMPLE/CERTIFICATE TAKEN TO LAB

UNLOADED AT (tank number, unit, warehouse, etc.)

COMMENTS

SECTION 3

LAB TECHNICIAN	ACCEPT	REJECT	REASON FOR REJECTION
<i>JH</i>	<input checked="" type="checkbox"/>		

COMMENTS

SECTION 4

SHIFT SUPERVISOR	ACCEPT	REJECT	REASON FOR REJECTION
<i>J. Williams</i>	<input checked="" type="checkbox"/>		

PLANT WEIGHT	UNLOADING TIMES	
NET	START TIME	END TIME

COMMENTS

RAW MATERIAL RECEIVING RECORD

No. 11191

CEDAR CHEMICAL 9000-1 REV: C

TIME IN AT GATE
0800

RECEIVED BY
M. Sullivan

SECTION 1

DATE	ORDER NO.	CAR OR TRUCK NO.	DECLARED WEIGHT
1-29-98	04087455	SN10121015-6	Net <i>NA</i>

SHIPPER	CARRIER
<i>Bayer</i>	<i>Sample E</i>

QUANTITY	CONTAINER	DESTINATION	RAW MAT CODE #	DESCRIPTION
1	SK	unit #6	3020	DCA

COMMENTS
Lab Has C.O.A.

SECTION 2

RECIPIENT	TIME SAMPLE/CERTIFICATE TAKEN TO LAB
<i>M. Sullivan</i>	<i>9:55</i>

UNLOADED AT (tank number, unit/warehouse, etc.)
unit 6

COMMENTS
unit will be dropped & unloaded as per material spec

SECTION 3

LAB TECHNICIAN	ACCEPT	REJECT	REASON FOR REJECTION
<i>TLP</i>	<input checked="" type="checkbox"/>		

COMMENTS

SECTION 4

SHIFT SUPERVISOR	ACCEPT	REJECT	REASON FOR REJECTION
<i>[Signature]</i>	<input checked="" type="checkbox"/>		

PLANT WEIGHT	UNLOADING TIMES	
NET	START TIME	END TIME

COMMENTS

Bayer - DCA

Load Nov

	Date	Inv #	Drms	Net	Lbs	US\$	Per # Price
DCA Purchase	10/30/97	3041732			43,299	79,670.16	1.840
DCA Purchase	10/30/97	3041736			41,976	77,235.84	1.840
DCA Purchase	11/20/97	3041742			43,255	79,589.20	1.840
DCA Purchase	11/20/97	3041740			44,577	82,021.68	1.840
DCA Purchase	11/21/97	3041743			41,447	76,262.48	1.840
DCA Purchase	11/21/97	3041737			44,313	81,535.92	1.840
DCA Purchase	11/25/97	3041745			43,431	79,913.04	1.840
DCA Purchase	11/25/97	3041747			43,563	80,155.92	1.840
Ocean Freight							#REF!
Ocean Freight							#REF!
Duty							#REF!
Duty							#REF!
Inland Freight							#REF!
Total Cost delivered to Plant						636,384.24	#REF!

Accounting:	\$ Dollars	Unit Cst
C153-5910	636,384.24	
C153-5920	0.00	
Total	#REF!	#REF!



REMIT TO:
 BAYER CORPORATION
 P.O. BOX 75662
 CHARLOTTE, NC 28275-5662

FIBERS ORGANICS AND RUBBER DIV
 100 BAYER ROAD
 PITTSBURGH, PA. 15205

ORDER INVOICE
 BILL TO: 005761-001

NO: 3041732

DATE: 10-30-97 CO-21 DIV-10 DP-0012

SHIP TO: 005761-001

CEDAR CHEMICAL CORP
 P.O. BOX 2749
 W HELENA AR 72390

West Helena Act. Dept.
RECEIVED
 NOV 04 1997
RECEIVED

CEDAR CHEMICAL CORP
 HWY 242 S
 W HELENA AR 72390
 ENTERED

DEC 10 1997

11478

INVOICE

PLEASE RETURN THE "DUPLICATE INVOICE" COPY WITH
 REMITTANCE TO INSURE PROPER PAYMENT IS APPLIED TO YOUR
 ACCOUNT.

PURCHASE ORDER #: 04-087455
 FOB: NEW ORLEANS, LA

ORDER INVOICE NO: 3041732 DATE: 10-30-97
 FREIGHT: COLLECT DATE SHIPPED: 10-30-97

ITEM	CODES	DESCRIPTION	QUANTITY	UNIT PRICE	AMOUNT
01	N826	3,4-DICHLOROANILINE, PURE	43,299.00	1.84	79,670.16

080081 06Y63629
 BULK CONT: SNIU121338 GW: 50,000 TW: 6,701 NW: 43,299 (LBS)
 ASSAY: 100.00

SEND A CERTIFICATE OF DELIVERY OF IMPORTED MERCHANDISE TO THE
 ATTENTION OF MR BOB CHRISTIAN; CEDAR CHEMICAL CORP; PO BOX
 2749; WEST HELENA, AR 72390. SPECIAL PRICING APPLIES

VENDOR #		INVOICE #	
2987		3041732	
PO #	REC. RPT. #	INV. CD	INV. DATE
87455		1	103097
TERMS CODE	DUE DATE	FRT BILL CD	SALES ORDER #
3			
INVOICE AMT.	DISC ALLOWED		
79,670.16			
GL NUMBER	AMOUNT	WORK ORDER #	
C1535910	79,670.16		
DONE BY		DATE	APPROVED BY
RK		12-9-97	OTW
		ENTERED BY	

79,670.16

LAST PAGE
 TION

**0109

IF IN YOUR PURCHASE ORDER, YOUR ORDER IS ACCEPTED
 IF SUCH CONTRACT EXISTS, YOUR ORDER IS ACCEPTED
 TERMS AND CONDITIONS PRINTED ON THE REVERSE SIDE

Corporation, Pittsburgh, PA 15205-9741

AB000007951



West Helena Acct. Dept.

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P.O. BOX 75662
CHARLOTTE, NC 28275-5662

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NOV 04 1997
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FIBERS ORGANICS AND RUBBER DIV
100 BAYER ROAD
PITTSBURGH, PA. 15205

ORDER INVOICE
BILL TO: 005761-001

NO: 3041736

DATE: 10-30-97 CO-21 DIV-10 DP-0012
SHIP TO: 005761-001

CEDAR CHEMICAL CORP
P.O. BOX 2749
W HELENA AR 72390

CEDAR CHEMICAL CORP
HWY 242 S
W HELENA AR 72390

11479

ENTERED
DEC 10 1997

INVOICE

PLEASE RETURN THE "DUPLICATE INVOICE" COPY WITH
REMITTANCE TO INSURE PROPER PAYMENT IS APPLIED TO YOUR
ACCOUNT

PURCHASE ORDER #: 04-087455
FOB: NEW ORLEANS, LA

ORDER INVOICE NO: 3041736 DATE: 10-30-97
FREIGHT: COLLECT DATE SHIPPED: 10-30-97

ITEM	CODES	DESCRIPTION	QUANTITY	UNIT PRICE	AMOUNT
01	N826	3,4-DICHLOROANILINE, PURE	41,976.00	1.84	77,235.84

080081 06Y63630
BULK CONT: SNIU121340 GW: 50,000 TW: 8,024 NW: 41,976 (LBS)
ASSAYZ100.00

SEND A CERTIFICATE OF DELIVERY OF IMPORTED MERCHANDISE TO THE
ATTENTION OF MR BOB CHRISTIAN; CEDAR CHEMICAL CORP; PO BOX
2749; WEST HELENA, AR 72390. SPECIAL PRICING APPLIES

VENDOR #		INVOICE #	
2987		3041736	
P.O. #	REC. RPT. #	INV. CD	INV. DATE
87455		1	103097
TERMS CODE	DUE DATE	FRT BILL CD	SALES ORDER #
5			
INVOICE AMT	DISC ALLOWED		
77,235.84			
GL NUMBER	AMOUNT	WORK ORDER #	
01535910	77,235.84		
DATE	APPROVED BY	ENTERED BY	
12-9-97	OTW	886	
DONE BY	DATE	APPROVED BY	ENTERED BY
RE	12-9-97	OTW	886

77,235.84

LAST PAGE
TION **0110

IN YOUR PURCHASE ORDER, YOUR ORDER IS ACCEPTED
IF SUCH CONTRACT EXISTS, YOUR ORDER IS ACCEPTED
TERMS AND CONDITIONS PRINTED ON THE REVERSE SIDE

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AB0000079519



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 CHARLOTTE, NC 28275-5662

FIBERS ORGANICS AND RUBBER DIV
 100 BAYER ROAD
 PITTSBURGH, PA. 15205

ORDER INVOICE
 BILL TO: 005761-001

NO: 3041742

DATE: 11-20-97 CO-21 DIV-10 DP-0012
 SHIP TO: 005761-001

CEDAR CHEMICAL CORP
 P.O. BOX 2749
 W HELENA AR 72390

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CEDAR CHEMICAL CORP
 HWY 242 S
 W HELENA AR 72390

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 NOV 30 1997
 W HELENA

INVOICE

11580

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 REMITTANCE TO INSURE PROPER PAYMENT IS APPLIED TO YOUR
 ACCOUNT

PURCHASE ORDER #: 04-087455
 FOB: NEW ORLEANS, LA

ORDER INVOICE NO: 3041742 DATE: 11-20-97
 FREIGHT: COLLECT DATE SHIPPED: 11-18-97

ITEM	CODES	DESCRIPTION	QUANTITY	UNIT PRICE	AMOUNT
01	N826	3,4-DICHLOROANILINE, PURE	43,255.00	1.84	79,589.20

080081 06Y63633
 BULK CONT: SNIU121078 GW: 50,000 TW: 6,745 NW: 43,255 (LBS)
 ASSAY: 100.00

SEND A CERTIFICATE OF DELIVERY OF IMPORTED MERCHANDISE TO THE
 ATTENTION OF MR BOB CHRISTIAN; CEDAR CHEMICAL CORP; PO BOX
 2749; WEST HELENA, AR 72390. SPECIAL PRICING APPLIES

VENDOR #		INVOICE #	
2987		3041742	
P.O. #	REC. RPT. #	INV CD	INV. DATE
87455		1	112097
TERMS CODE	DUE DATE	FRT BILL CD	SALES ORDER #
2			
INVOICE AMT.		DISC. ALLOWED	
79,589.20			
GL NUMBER	AMOUNT	WORK ORDER #	
C1535910	79,589.20	m oo oo	
DONE BY	DATE	APPROVED BY	ENTERED BY
RY	11-20-97		

E 79,589.20

LAST PAGE
 RATION **0077

ED IN YOUR PURCHASE ORDER. YOUR ORDER IS ACCEPTED
 NO SUCH CONTRACT EXISTS. YOUR ORDER IS ACCEPTED
 TERMS AND CONDITIONS PRINTED ON THE REVERSE SIDE

Corporation. Pittsburgh, PA 15205-0701 79519



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 BAYER CORPORATION
 P.O. BOX 75662
 CHARLOTTE, NC 28275-5662

FIBERS ORGANICS AND RUBBER DIV
 100 BAYER ROAD
 PITTSBURGH, PA. 15205

ORDER INVOICE
 BILL TO: 005761-001

NO:3041740

DATE: 11-20-97 CO-21 DIV-10 DP-0012
 SHIP TO: 005761-001

CEDAR CHEMICAL CORP
 P.O. BOX 2749
 W HELENA AR 72390

West Helena Acct. Dept.

CEDAR CHEMICAL CORP
 HWY 242 S
 W HELENA AR 72390

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INVOICE

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PURCHASE ORDER #:04-087455
 FOB:NEW ORLEANS, LA

ORDER INVOICE NO: 3041740 DATE: 11-20-97
 FREIGHT: COLLECT DATE SHIPPED: 11-18-97

ITEM	CODES	DESCRIPTION	QUANTITY	UNIT PRICE	AMOUNT
01	N826	3,4-DICHLOROANILINE, PURE	44,577.00	1.84	82,021.68

080081 06Y63632

BULK CONT:SNIU121327 GW: 50,000 TW: 5,423 NW: 44,577 (LBS)
 ASSAY%100.00

SEND A CERTIFICATE OF DELIVERY OF IMPORTED MERCHANDISE TO THE
 ATTENTION OF MR BOB CHRISTIAN; CEDAR CHEMICAL CORP; PO BOX
 2749; WEST HELENA, AR 72390. SPECIAL PRICING APPLIES

VENDOR #		INVOICE #	
2987		3041740	
P.O. #	REC. RPT. #	INV. CD	INV. DATE
87455		1	112097
TERMS CODE	DUE DATE	FRT. BILL CD	SALES ORDER #
2			
INVOICE AMT	DISC ALLOWED		
82,021.68			
GL NUMBER	AMOUNT	WORK ORDER #	
01535910	82,021.68		
DONE BY	DATE	APPROVED BY	ENTERED BY
RK	11-30-97	[Signature]	[Signature]

E 82,021.68

LAST PAGE
 RATION **0076

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 NO SUCH CONTRACT EXISTS YOUR ORDER IS ACCEPTED
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PITTSBURGH, PA. 15205

ORDER INVOICE
BILL TO: 005761-001

NO: 3041743

DATE: 11-25-97 CO-21 DIV-10 DP-0012
SHIP TO: 005761-001

CEDAR CHEMICAL CORP
P.O. BOX 2749
W HELENA AR 72390

CEDAR CHEMICAL CORP
HWY 242 S
W HELENA AR 72390

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ACCOUNT

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PURCHASE ORDER #: 04-087455
FOB: NEW ORLEANS, LA

ORDER INVOICE NO: 3041743 DATE: 11-25-97
FREIGHT: COLLECT DATE SHIPPED: 11-21-97

ITEM	CODES	DESCRIPTION	QUANTITY	UNIT PRICE	AMOUNT
01	N826	3,4-DICHLOROANILINE, PURE	41,447.00	1.84	76,262.48

080081 06Y63634
BULK CONT: UTCU226007 GW: 45,000 TW: 3,553 NW: 41,447 (LBS)
ASSAY: 100.00

SEND A CERTIFICATE OF DELIVERY OF IMPORTED MERCHANDISE TO THE
ATTENTION OF MR BOB CHRISTIAN; CEDAR CHEMICAL CORP; PO BOX
2749; WEST HELENA, AR 72390. SPECIAL PRICING APPLIES

VENDOR #		INVOICE #	
2987		3041743	
P.O. #	REC. RPT. #	INV. CD	INV. DATE
87455		1	112597
TERMS CODE	DUE DATE	FRT. BILL CD	SALES ORDER #
3			
INVOICE AMT.		DISC. ALLOWED	
76,262.48			
GL NUMBER	AMOUNT	WORK ORDER #	
01335910	76,262.48		
DONE BY	DATE	APPROVED BY	ENTERED BY
RK	12-9-97		

CE 76,262.48

1 LAST PAGE
ORATION **0121

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 NO: 3041737

FIBERS ORGANICS AND RUBBER DIV
 100 BAYER ROAD
 PITTSBURGH, PA. 15205

ORDER INVOICE
 BILL TO: 005761-001

DATE: 11-25-97 CO-21 DIV-10 DP-0012
 SHIP TO: 005761-001

CEDAR CHEMICAL CORP
 P.O. BOX 2749
 W HELENA AR 72390

CEDAR CHEMICAL CORP
 HWY 242 S
 W HELENA AR 72390

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 ACCOUNT

INVOICE

PURCHASE ORDER #: 04-087455
 FOB: NEW ORLEANS, LA

ORDER INVOICE NO: 3041737 DATE: 11-25-97
 FREIGHT: COLLECT DATE SHIPPED: 11-21-97

ITEM	CODES	DESCRIPTION	QUANTITY	UNIT PRICE	AMOUNT
01	N826	3,4-DICHLOROANILINE, PURE	44,313.00	1.84	81,535.92

080081 06Y63631
 BULK CONT: SNIU121336 GW: 50,000 TW: 5,687 NW: 44,313 (LBS)
 ASSAY: 100.00

SEND A CERTIFICATE OF DELIVERY OF IMPORTED MERCHANDISE TO THE
 ATTENTION OF MR BOB CHRISTIAN; CEDAR CHEMICAL CORP; PO BOX
 2749; WEST HELENA, AR 72390. SPECIAL PRICING APPLIES

VENDOR #		INVOICE #	
2987		3041737	
P.O. #	REC. RPT. #	INV CO	INV DATE
87455		1	112597
TERMS CODE	DUE DATE	FRT. BILL CD	SALES ORDER #
2			
INVOICE AMT.		DISC. ALLOWED	
81,535.92			
GL NUMBER	AMOUNT	WORK ORDER #	
01535910	81,535.92		
DONE BY	DATE	APPROVED BY	ENTERED BY
RK	12-9-97	QTN	

81,535.92

1 LAST PAGE
 ORATION **0120

IF IN YOUR PURCHASE ORDER, YOUR ORDER IS ACCEPTED
 NO SUCH CONTRACT EXISTS, YOUR ORDER IS ACCEPTED
 TERMS AND CONDITIONS PRINTED ON THE REVERSE SIDE

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 AB00000795



West Helena Acct. Dept.

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BAYER CORPORATION
P.O. BOX 75662
CHARLOTTE, NC 28275-5662

RECEIVED
DEC 02 1997
RECEIVED

FIBERS ORGANICS AND RUBBER DIV
100 BAYER ROAD
PITTSBURGH, PA. 15205

ORDER INVOICE
BILL TO: 005761-001

NO: 3041745

DATE: 11-25-97 CD-21 DIV-10 DP-0012
SHIP TO: 005761-001

CEDAR CHEMICAL CORP
P.O. BOX 2749
W HELENA AR 72390

CEDAR CHEMICAL CORP
HWY 242 S
W HELENA AR 72390

10820

ENTERED

DEC 10 1997

WEST HELENA

INVOICE

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REMITTANCE TO INSURE PROPER PAYMENT IS APPLIED TO YOUR
ACCOUNT

PURCHASE ORDER #: 04-087455
FOB: NEW ORLEANS, LA

ORDER INVOICE NO: 3041745 DATE: 11-25-97
FREIGHT: COLLECT DATE SHIPPED: 11-25-97

ITEM	CODES	DESCRIPTION	QUANTITY	UNIT PRICE	AMOUNT
01	N826	3,4-DICHLOROANILINE, PURE	43,431.00	1.84	79,913.04

080081 06Y63635
BULK CONT: TIFU117076 GW: 50,000 TW: 6,569 NW: 43,431 (LBS)
ASSAY%100.00

SEND A CERTIFICATE OF DELIVERY OF IMPORTED MERCHANDISE TO THE
ATTENTION OF MR BOB CHRISTIAN; CEDAR CHEMICAL CORP; PO BOX
2749; WEST HELENA, AR 72390. SPECIAL PRICING APPLIES

VENDOR #		INVOICE #	
2987		3041745	
P.O. #	REC. RPT. #	INV. CD	INV. DATE
87455		1	112597
TERMS CODE	DUE DATE	FRT BILL CD	SALES ORDER #
3			
INVOICE AMT.	DISC. ALLOWED		
79,913.04			
GL NUMBER	AMOUNT	WORK ORDER #	
01535910	79,913.04		
DONE BY	DATE	APPROVED BY	ENTERED BY
RK	12-9-97	ANT	

79,913.04

LAST PAGE
RATION

**0122

ED IN YOUR PURCHASE ORDER YOUR ORDER IS ACCEPTED
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Corporation, Pittsburgh, PA 15205-9741

AB0000079519



West Helena Acct Dept

REMIT TO:
BAYER CORPORATION
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CHARLOTTE, NC 28275-5662

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DEC 02 1997
RECEIVED

FIBERS ORGANICS AND RUBBER DIV
100 BAYER ROAD
PITTSBURGH, PA. 15205

ORDER INVOICE
BILL TO: 005761-001

NO: 3041747

DATE: 11-25-97 CO-21 DIV-10 DP-0012
SHIP TO: 005761-001

CEDAR CHEMICAL CORP
P.O. BOX 2749
W HELENA AR 72390

CEDAR CHEMICAL CORP
HWY 242 S
W HELENA AR 72390

10821 ENTERED
DEC 10 1997

INVOICE

PLEASE RETURN THE "DUPLICATE INVOICE" COPY WITH
REMITTANCE TO INSURE PROPER PAYMENT IS APPLIED TO YOUR
ACCOUNT

PURCHASE ORDER #: 04-087455
FOB: NEW ORLEANS, LA

ORDER INVOICE NO: 3041747 DATE: 11-25-97
FREIGHT: COLLECT DATE SHIPPED: 11-25-97

ITEM	CODES	DESCRIPTION	QUANTITY	UNIT PRICE	AMOUNT
01	N826	3,4-DICHLOROANILINE, PURE	43,563.00	1.84	80,155.92

080081 06Y63636
TANK TRUCK:000 GW: 50,000 TW: 6,437 NW: 43,563 (LBS)
ASSAY%100.00

SEND A CERTIFICATE OF DELIVERY OF IMPORTED MERCHANDISE TO THE
ATTENTION OF MR BOB CHRISTIAN; CEDAR CHEMICAL CORP; PO BOX
2749; WEST HELENA, AR 72390. SPECIAL PRICING APPLIES

VENDOR #		INVOICE #	
2987		3041747	
P.O. #	REC. RPT. #	INV. CD	INV. DATE
87455		1	112597
TERMS CODE	DUE DATE	FRT BILL CD	SALES ORDER #
3			
INVOICE AMT.	DISC. ALLOWED		
80,155.92			
GL NUMBER	AMOUNT	WORK ORDER #	
01535910	80,155.92		
DONE BY	DATE	APPROVED BY	ENTERED BY
RK	12-9-97		

80,155.92

LAST PAGE
ORATION

**0123

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IF NO SUCH CONTRACT EXISTS, YOUR ORDER IS ACCEPTED
IF TERMS AND CONDITIONS PRINTED ON THE REVERSE SIDE

Corporation, Pittsburgh, PA 15205-9741

AB0000079519



Telefax
**Industrial Chemicals Division
Organic Chemicals**

Date:	<u>12/9/97</u>	Pages:	<u>3</u>
To:	<u>Bob Christian</u>	From:	<u>Andy Vannatta</u>
Company:	<u>CEDAR</u>	Company:	<u>Organic Chemicals</u>
Fax:	<u>9-1-870-572-3795</u>	Fax:	<u>(412) 777-4109</u>
Phone:	<u>9-1-870-572-3701 X227</u>	Phone:	<u>(412) 777-2512</u>
cc:	<u>Keith Guidroz 504-887-8898</u> <u>(Broker's Instructions Only)</u>		

Re: 3,4-DICHLOROANILINE

We are attaching brokers instructions and analysis covering ONE
 container(s) of 3,4-DCA, arriving on the DOCL INNOVATION on 12/11
 Container number (s) SMI412103 Our reference number (s) 0646244

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FRITZ COMPANIES, INC.
101 DELTA DRIVE/SUITE B
ST. ROSE, LA 70087
FAX: 504-466-4322

Bayer Corporation
100 Bayer Road
Pittsburgh, PA 15205-6791
Phone: 412 777-8000

NOVEMBER 26, 1997

BAYER ORDER # : 06Y63644
CUSTOMER : CEDAR CHEMICAL CORP
CUSTOMER PO :
VESSEL : OOCL INNOVATION
BL # : SKOLT SHN972231
CONTAINER # : SHIU121073-1
NET WGT : 19260.00 KG
PORT OF LOADING : ROTTERDAM
PORT OF ARRIVAL : NEW ORLEANS

ARRIVAL DATE : 12/11/97

11/20/97

ENCLOSED, PLEASE FIND DOCUMENTS PERTAINING TO THE FOLLOWING.

1 TANK CONTAINER(S) OF 3,4 DICHLOROANILINE, PURE (NB26 99)

MARK I.D. ENTRY IN THE NAME OF BAYER CORPORATION (IMPORTER'S # 25-1339219BU)

TRANSACTION BETWEEN RELATED PARTIES

ENTER WITH U. S. CUSTOMS AS :
H.S. # : 2921.42.2300
RATE : 1.70¢ / KG + 15.10 ¢
CAS # : NOT REQUIRED
POSITIVE TSCA CERTIFICATION REQUIRED

PLEASE ISSUE DELIVERY ORDER(S) TO : CARRIER TO BE ADVISED

SHIP ON A COLLECT BASIS TO :
CEDAR CHEMICAL CORP
HIGHWAY 242
WEST HELENA, AR 72390

INLAND BILL OF LADING ATTACHED

SPECIAL INSTRUCTIONS :
NOTE ON DELIVERY ORDER: CARRIER TO CALL FOR DELIVERY APPOINTMENT
BROKER TO SUPPLY CARRIER WITH ATTACHED MSDS AND BULK TAGS. CONTACT KEITH
GUIDROZ AT 504-887-8897 TO SET UP DELIVERY WITH TRIPLE E TRANSPORT.

CC: CEDAR CHEMICAL CORP
XX, LOG (AV), JB

JENNIFER HOLUB (JB)
412-777-2158

WEST HELENA
1998 BUDGET

**CEDAR CHEMICAL CORPORATION
ORGANICS DIVISION
1998 BUDGET ASSUMPTIONS**

GENERAL COMMENTS

The 1998 budget is a very aggressive plan which capitalizes on (1) recent developments in our core business, DCA/propanil (explained below), (2) favorable developments in ethephon, (3) very attractive short term opportunities in Custom Manufacturing, and (4) resolution of several plant problems which have negatively impacted costs for the last several years.

Although the business remains subject to changes from year to year, we have now achieved a new financial plateau for the future as a result of the business strategy put in place several years ago. The full year 1998 budget clearly demonstrates the potential for the Organic portion of Cedar's business in spite of our being a small, generic supplier in the markets which we serve.

Sales, gross margin, operating income and pretax income will exceed all previous levels. Sales are projected at \$53,288M, the first time we have exceeded \$50,000M. Gross margin is projected at \$10,304M and operating income should be \$10,365M after consolidation of Riceco results into Cedar's. Pretax income will approach \$6,800M, the best year ever. Full year 1992 reached a pretax level of \$5,680M but included over \$2,200M in one time benefits from termination of the Grace project.

PROPANIL

During 1997, Cedar and Westrade USA, Inc. formed a 50/50 limited liability corporation, Riceco, LLC, in which the propanil businesses of both Cedar and Westrade were contributed to the venture. Riceco is charged with the global responsibility for the marketing of all rice products on behalf of both partners as well as any products which Riceco may be able to attract from other suppliers. Our vision for Riceco is that it will become the premier marketing company for rice crop protection chemicals throughout the world. Riceco will operated independently and have its own management and banking relations.

Under the LLC agreement, Cedar will provide 100% of the propanil products required by Riceco as well as the DCA required for those products. Cedar will make a nominal margin on the products sold to Riceco as well as share in the margins generated by Riceco. Additionally, Cedar has been able to reduce its direct SG&A expenses associated with propanil sales by about 40% since Riceco will handle the marketing of propanil products, and Cedar will provided certain services to Riceco at a negotiated fee.

Initial reactions to the creation of Riceco are very positive with the idea of a company focused solely on one crop (rice), the major food crop of the world, being a novel and beneficial approach.

The prior propanil agreement with Rohm and Haas under which Cedar provides 100% of the Rohm and Haas requirements for the U.S. is not included in Riceco. Also, although Riceco has a right of first refusal for Cedar DCA used in propanil, Cedar is permitted to sell any excess DCA not required by Riceco. Riceco will have significant long term benefit to Cedar and is predicted to contribute over \$2,900M additional pretax income in 1998, the first full year of benefit from the Riceco venture.

The Rohm and Haas agreement mentioned above has been extended by an additional six (6) years through the year 2007. Cedar will continue to provide 100% of Rohm and Haas's requirements for the U.S. but the minimum guaranteed profit has been increased from \$0.075 per pound to \$0.20 per pound. Additionally, Cedar will provide all of the propanil technical required by Rohm and Haas for their European operations and have an option to provide all of the DCA required by Rohm and Haas for formulated goods in Europe.

OTHER PRODUCTS

This area of the business will have much improved results for 1998 solely the result of ethephon, while diuron and 2,4-DB (Butoxone) will continue to experience both pricing and volume pressure. Overall gross margin is projected to improve by over \$1,000M to \$1,649M.

During 1997 Cedar entered into a short term agreement with Rhone-Poulenc under which Cedar will assign its ethephon supply contract with Micro Flo to Rhone-Poulenc. In return, Rhone-Poulenc will pay Cedar a commission on ethephon sold to Micro Flo by Rhone-Poulenc and will utilize Cedar's manufacturing facility for certain Contract Manufacturing products. Once the economics of those the new products are finalized, the agreement will become long term.

The Butoxone product line will contribute about \$200M in gross margin during 1998 compared to recent levels of \$500M to \$750M as we take an aggressive approach to regaining market share lost during the effort to sell the Organics Division during 1996 and while concentrating on the formation of Riceco during 1997. New products introduced to the market have reduced the demand for Butoxone and as a result, prices have also dropped as suppliers seek to maintain volume in a shrinking market. We will consider selling Butoxone in the future if an acceptable price can be negotiated.

Diuron will continue to be under price pressure as well although product usage remains good. Cedar is not well positioned on the cost side, but this product remains very important from a strategic standpoint. We have entered into an engineering project with another party to provide domestic phosgenation which, if successful, will improve margins significantly, but not before the year 2000.

TOTAL PESTICIDES

Total sales for Pesticides will exceed \$38,750M even though transfer prices to Riceco are at a low level; gross margin will be essentially flat. Operating income will grow by -\$3,000M, however, as the benefit of Riceco and improvements in other products are felt. Interest expense will be reduced by about \$430M due to improved payment terms through Riceco and reallocation of interest between Pesticides and Specialty Products, resulting in pretax income of -\$5,250M, an improvement of \$3,460M over 1997.

SPECIALTY CHEMICALS

THAM sales will remain flat but margin will improve along with lower cost of sales. Inroads have been made with several major customers with potential for additional growth in the future. Gross margin will be ~\$800M, an improvement of ~\$500M over 1997.

Major improvement is predicted in Custom Manufacturing. The BFG and Zeneca contracts will continue with acceptable results while a new project from FMC will contribute approximately \$3,000M in gross margin. This project is a short term arrangement with potential for a longer term commitment by FMC.

For the first time, essentially all of the capacity for Custom Manufacturing is spoken for with only \$1,260M in sales (~10%) unidentified at this time. The strategy of aggressive growth for Custom Manufacturing is paying off with a number of potential projects being analyzed, most of which will require capital investment for new manufacturing facilities.

Overall, Specialty Chemicals will contribute about \$3,845M in gross margin, an improvement of ~\$2,885M. Operating income will increase by \$2,400M and SG&A will increase by \$-495M due to additional staff added in 1997 and reallocation of Corporate Administrative expenses. Interest expense will increase by \$1,010M due to the higher level of business and reallocation of interest between Specialty Chemicals and Pesticides, resulting in pretax income of ~\$1,535M compared to \$150M in 1997.

SG&A EXPENSE

Total SG&A will remain about the same with Pesticides down -\$600M and Specialty Chemicals up \$495M. The reduction in Pesticides gained by the creation of Riceco is offset by an increase to support new product development and acquisition efforts. The Specialty Chemicals increase is a result of additional staff in support of the business and the associated travel expenses. Corporate Administrative expense is down \$200M, and the allocation between Pesticides and Specialty Chemicals has been adjusted in favor of Pesticides.

CAPITAL EXPENDITURES

Capital expenditures of \$4,250M are planned with \$1,065M due to plant infrastructure needs as a result of recent and planned growth. Major DCA/propanil improvements and replacements will run \$1,585M, identified custom projects will require \$400M, cost reduction projects require \$770M, and the remainder, \$430M, is required for other general plant upkeep and maintenance of business replacement.

Cedar Chemical Corporation-West Helena
Projected Balance Sheet
December 31,

	<u>1997</u> <u>Estimate</u>	<u>1998</u> <u>Budget</u>
ASSETS		
Current Assets		
Cash	19	12
Accounts receivable	17,582	9,414
Inventories	12,301	10,595
Other current assets	699	75
Total current assets	<u>30,601</u>	<u>20,096</u>
Property, plant and equipment-net	16,757	18,067
Investment in Riceco	1,860	1,932
Other assets	521	437
	<u>49,739</u>	<u>40,532</u>
LIABILITIES AND SHAREHOLDER'S EQUITY		
Current Liabilities		
Accounts payable	9,524	3,593
Accrued expenses	2,220	362
Income taxes payable		
Total current liabilities	<u>11,744</u>	<u>3,955</u>
Other liabilities	750	750
Shareholder's equity:		
Common stock		
Inter-Company debt	37,245	31,481
Retained earnings		4,346
Total equity	<u>37,245</u>	<u>35,827</u>
	<u>49,739</u>	<u>40,532</u>

WEST HELENA PLANT
STATEMENT OF INCOME
For the Year Ended December 31,

	1996 Actual			1997 Estimate			1998 Budget		
	Qty	Unit Price	Total	Qty	Unit Price	Total	Qty	Unit Price	Total
DCA/Propanil:									
DCA lbs	1,082.4	1.33	1,439	842.1	1.42	1,193	725.0	1.55	1,124
Propanil Tech lbs	2,784.9	2.17	6,038	1,470.2	1.52	2,235	1,875.0	1.44	2,700
Flaked Tech lbs	1,902.1	1.33	2,535	3,497.6	1.55	5,425	4,066.1	1.45	5,889
Wham gls	180.0	13.20	2,376	357.7	13.99	5,003	400.4	9.60	3,844
55% Blend lbs							244.3	1.50	366
4# Propanil gls	335.2	12.60	4,224	364.5	11.06	4,031	652.2	9.53	6,216
3# Propanil gls	440.8	7.98	3,517	495.3	8.07	3,998	668.3	7.95	5,313
Stam	633.1	10.68	6,761	584.3	9.78	5,712	395.0	8.98	3,537
Misc.			24			-130			
Sub-Total Net Sales			26,915			27,467			28,989
Cost of Goods Sold			21,971			21,881			24,179
Gross Margin			4,944			5,586			4,810
Gross Margin %			18.4%			20.3%			16.8%
Other Products:									
Diuron lbs	2,438.5	2.71	6,605	2,192.7	2.58	5,668	1,950.0	2.75	5,363
Diuron Col lbs	234.3	2.10	491						
Bandit gls	2.9	17.24	50						
Tough gls			-1						
Pluck gls	95.0	-9.39	-892						
Ethephon lbs	344.2	3.30	1,138	1,283.5	1.93	2,483	2,250.0	1.15	2,586
Sale of Butoxone									
Butoxone 175 gls	37.3	23.07	861	33.8	18.89	639	50.0	16.46	823
Butoxone 200 gls	25.8	21.67	559	27.0	20.87	564	32.0	18.66	597
Butoxone 750 lbs	10.4	20.24	209	7.8	13.46	105	30.0	14.60	438
Sub-Total Net Sales			9,018			9,458			9,807
Cost of Goods Sold			9,985			8,433			8,158
Gross Margin			-967			1,025			1,649
Gross Margin %			-10.7%			10.8%			16.8%
Total Pesticides									
Net Sales			35,933			36,925			38,796
Cost of Goods Sold			31,956			30,314			32,338
Gross Margin			3,977			6,611			6,459
Gross Margin %			11.1%			16.6%			16.6%
S, G & A									
Direct			2,402			2,064			1,723
Allocated			587			540			283
Total SG&A			2,990			2,604			2,006
Joint Venture Income						485			3,069
Operating Income			987			4,493			7,522
Interest			2,412			2,699			2,267
Pretax Income			-1,425			1,794			5,255

	1996 Actual			1997 Estimate			1998 Budget		
	Qty	Unit Price	Total	Qty	Unit Price	Total	Qty	Unit Price	Total
Specialty Chemical									
TA lbs	484.4	5.30	2,569	603.6	5.07	3,061	600.0	5.12	3,072
Trometamol lbs	0.4	9.75	4	3.2	5.94	19			
Sub-Total Net Sales			2,573			3,080			3,072
Cost of Goods Sold			2,623			2,782			2,273
Gross Margin			-50			298			799
Gross Margin %			-1.9%			9.7%			26.0%
Custom Manufacturing:									
Acifluorfen lbs	297.9	3.75	1,116	1,893.4	2.05	3,469	1,983.8	1.81	3,590
BFG lbs	4,796.3	0.29	1,397	7,505.8	0.30	2,220	6,875.0	0.23	1,600
Butyl Chloride lbs	284.4	0.41	116	274.1	0.40	111			
Cypermethrin lbs	178.1	4.29	764						
Dehpa lbs	970.1	0.42	409						
Graphsize lbs	2002.7	0.56	1,131						
Permethrin lbs	67.9	3.34	227	189.4	3.29	624			
FMC-5/Nitro lbs							471.0	10.55	4,969
Other						163	630.0	2.00	1,260
Sub-Total Net Sales			5,160			6,587			11,419
Cost of Goods Sold			6,355			5,924			8,372
Gross Margin			-1,195			663			3,047
Gross Margin %			-23.2%			10.1%			26.7%
Total Specialty/Custom									
Net Sales			7,733			9,667			14,491
Cost of Goods Sold			8,978			8,706			10,646
Gross Margin			-1,245			961			3,845
Gross Margin %			-16.1%			14.5%			26.5%
S, G & A									
Direct			355			448			891
Allocated			65			60			112
Total SG&A			420			508			1,003
Operating Income			-1,665			453			2,842
Interest			268			302			1,309
Pretax Income			-1,933			152			1,533
Environmental (Info Only)									
			126			80			230
(Note: Shown in Propanil Domestic)									
Total Organics									
Net Sales		% Sales	43,666		% Sales	46,592		% Sales	53,288
Cost of Goods Sold		100.0%	40,934		100.0%	39,020		100.0%	42,984
Gross Margin		93.7%	2,732		83.7%	7,572		80.7%	10,304
Gross Margin %		6.3%			16.3%			19.3%	
S, G & A									
Direct		6.3%	2,757		5.4%	2,512		4.9%	2,614
Allocated		1.5%	652		1.3%	600		0.7%	395
Total S,G&A			3,410			3,112			3,009
Joint Venture Income					1.0%	485		5.8%	3,069
Operating Income		-1.6%	-678		10.6%	4,946		19.4%	10,364
Interest		6.1%	2,680		6.4%	3,000		6.7%	3,576
Income Before Tax		-7.7%	-3,358		4.2%	1,946		12.7%	6,788

1/22/98

WEST HELENA PLANT
QUANTITIES SOLD/PRODUCED
For the Year Ended December 31,

	<u>1996</u> Actual	<u>1997</u> Estimate	<u>1998</u> Budget
DCA			
Pounds Sold - Domestic	1,082,418	842,180	725,000
Avg Net Selling Pr/lb	\$1.33	\$1.42	\$1.55
Pounds Produced	11,039,070	11,624,630	12,935,000
Mfg Cost/Pound	\$1.15	\$1.17	\$1.06
DIURON			
Pounds Sold	2,438,489	2,192,793	1,950,000
Avg Net Selling Pr/lb	\$2.71	\$2.58	\$2.75
Pounds Produced	1,958,997	2,526,650	1,000,000
Mfg Cost/Pound	\$2.75	\$2.61	\$2.59
DIURON COL			
Pounds Sold	234,315		
Avg Net Selling Pr/lb	\$2.10		
Pounds Produced	254,991		
Mfg Cost/lb	\$1.95		
PROPANIL TECH			
Pounds Sold - Domestic	2,784,860	1,470,240	1,875,000
Avg Net Selling Pr/lb	\$2.17	\$1.52	\$1.44
Pounds Produced	10,751,255	13,001,533	14,971,000
Mfg Cost/lb	\$1.15	\$1.18	\$1.07
FLAKED TECH			
Pounds Sold - Domestic	1,902,108	3,497,692	4,066,094
Avg Net Selling Pr/lb	\$1.33	\$1.55	\$1.45
Pounds Produced	2,686,500	6,013,500	6,450,000
Mfg Cost/Pound	\$1.13	\$1.23	\$1.12
55% BLEND			
Pounds Sold - Export			244,320
Avg Net Selling Pr/lb			\$1.50
Pounds Produced			244,000
Mfg Cost/Pound			\$1.01

65

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1/22/98

WEST HELENA PLANT
QUANTITIES SOLD/PRODUCED
For the Year Ended December 31,

	<u>1996</u> <u>Actual</u>	<u>1997</u> <u>Estimate</u>	<u>1998</u> <u>Budget</u>
PROPANIL 3#			
Gallons Sold - Export	440,809	495,378	668,336
Avg Net Sell Pr/Gl	\$7.98	\$8.07	\$7.95
Gallons Produced	429,417	487,778	670,000
Mfg Cost/Gallon	\$7.15	\$7.47	\$7.08
PROPANIL 4#			
Gallons Sold - Domestic	335,158	364,551	652,242
Avg Net Sell Pr/Gl	\$12.60	\$11.06	\$9.53
Gallons Produced	336,285	343,622	651,000
Mfg Cost/Gallon	\$8.22	\$8.44	\$8.18
WHAM			
Gallons Sold - Domestic	180,020	357,829	400,405
Avg Net Sell Pr/Gl	\$13.20	\$13.98	\$9.60
Gallons Produced	122,605	381,779	382,000
Mfg Cost/Gallon	\$11.14	\$8.36	\$7.79
BANDIT			
Gallons Sold	2,853		
Avg Net Sell Pr/Gl	\$17.74		
Gallons Produced	2,853		
Mfg Cost/Gallon	\$16.02		
STAM			
Gallons Sold	633,060	584,362	395,000
Avg Net Sell Pr/Gl	\$10.68	\$9.78	\$8.96
Gallons Produced	654,418	613,797	396,000
Mfg Cost/Gallon	\$8.89	\$8.54	\$8.39

1/22/98

WEST HELENA PLANT
QUANTITIES SOLD/PRODUCED
For the Year Ended December 31,

	<u>1996</u> Actual	<u>1997</u> Estimate	<u>1998</u> Budget
BUTOXONE 7500			
Cases Sold	10,350	7,886	30,000
Avg Net Sell Pr/Case	\$20.24	\$13.36	\$14.60
Cases Produced	33,930		20,000
Mfg Cost/Case	\$13.39		\$13.65
BUTOXONE 175			
Gallons Sold	37,307	33,884	50,000
Avg Net Sell Pr/Gl	\$23.07	\$18.85	\$16.45
Gallons Produced	42,199	16,875	46,000
Mfg Cost/Gallon	\$10.57	\$12.25	\$12.22
BUTOXONE 200			
Gallons Sold	25,787	27,087	32,000
Avg Net Sell Pr/Gl	\$21.67	\$20.80	\$18.65
Gallons Produced	50,287	15,969	31,000
Mfg Cost/Gallon	\$12.24	\$15.16	\$13.68
ETHEPHON			
Gallons Sold	344,200	1,283,517	2,250,000
Avg Net Sell Pr/Gl	\$3.30	\$1.93	\$1.15
Gallons Produced		351,517	1,000,000
Mfg Cost/Gl		\$4.20	\$1.24
PLUCK			
Gallons Sold	95		
Avg Net Sell Pr/Gl	-\$9,391.90		
Gallons Produced			
Mfg Cost/Gallon			
CUSTOM PROJECTS			
Sales Dollars	\$7,733,433	\$9,666,971	\$14,491,385
(Detail on W.Helena Statement)			
Unit 1 Cost	1,677,301	2,210,986	3,617,052
Unit 4 Cost	2,280,603	2,371,363	2,505,063
Unit 5 Cost	2,488,734	3,138,860	3,813,311
Total Unit Cost	<u>6,446,638</u>	<u>7,721,209</u>	<u>9,935,426</u>

67

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Cedar Chemical Corporation
West Helena Plant
Cost of Goods Sold
For the Years Ending December 31,

	1996	1997	1998
	<u>Actual</u>	<u>Estimate</u>	<u>Budget</u>
Raw Materials Used	20,233,689	19,030,447	20,797,847
Pkg Materials & Containers	1,415,057	1,433,791	1,458,339
Finished Goods Purchased	3,204,081	5,311,536	
Salaries, Wages & Fringes	6,067,917	6,636,286	6,749,053
Utilities	1,581,401	1,730,629	1,812,077
Maintenance	1,378,125	1,509,032	1,727,280
Contract Labor	702,508	821,592	959,660
Operating Supplies	737,296	826,841	849,576
Waste Treatment	1,004,776	761,427	847,905
Contract Formulation Fees	459,172	451,081	536,700
Insurance & Taxes	644,887	762,152	860,473
Professional Fees	742,980	377,827	668,088
Royalties & Quantity Discounts	1,187,803	175,000	150,000
Lease/Rental Expense	262,588	554,641	486,368
Product Complaint	18,487	46,172	46,400
Start-Up Cost	228,361	55,164	55,164
Task Force	350,004	373,496	179,988
Travel & Entertainment	79,138	76,938	128,196
Fees & Tuitions	40,813	46,011	58,176
Communications	55,848	61,415	59,412
In Bond Freight	49,110	94,701	69,102
Depreciation	2,143,477	2,512,806	2,940,660
Other Cost	(2,236)	42,087	60,612
Total Cost	<u>42,585,282</u>	<u>43,691,072</u>	<u>41,501,076</u>
Change in Inventory	<u>(1,651,797)</u>	<u>(4,670,201)</u>	<u>1,483,000</u>
Total Cost of Goods Sold	<u>40,933,485</u>	<u>39,020,871</u>	<u>42,984,076</u>

Cedar Chemical Corporation - West Helena
Capital Expenditures Budget
1998

<u>Description</u>	<u>Amount</u>
SAFETY & HEALTH:	
Safety Showers	25,000
PSU, Autoclave Unit 5	30,000
Miscellaneous	50,000
ENVIRONMENTAL:	
Aerators	65,000
Storage Tank Vents	50,000
MAINTENANCE OF BUSINESS:	
SPECIALITY & CUSTOM:	
Reactor Replacements	210,000
DCA/PROPANIL SUPPORT:	
Reactor Replacement (R-4)	500,000
S6601, Pit Replacement	25,000
Tank for Prop. Cooling	80,000
T-6203, Sulfuric Acid Storage	75,000
T-6202, Nitric Acid Storage	150,000
T-6302, Mixed Acid	80,000
V-6104, re clad, coil replacement	350,000
T-6208, crud storage coils	50,000
R-6106, Dist. Vessel Coils	250,000
Vent Condensers, blend tanks	25,000
GENERAL PLANT:	
QC Lab Expansion	265,000
R & D Lab	50,000
Office Expansion	100,000
Power Distribution	300,000
Change Room Expansion	150,000
RR Spur Expansions	200,000
COST IMPROVEMENTS:	
2,3 Centrifuge	400,000
Condensate Return	250,000
Hydrogen/Zero Air Generators	20,000
Miscellaneous	100,000
MAJOR CEDAR & TOLL PROJECTS:	
Ethephon	200,000
BFG 85% on Stream	200,000
CARRY OVER:	
From Previous Year	0
To Next Year	0
	<u>4,250,000</u>

Cedar Chemical Corporation-West Helena

Projected Balance Sheet

1998

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
ASSETS												
Current Assets												
Cash	12	12	12	12	12	12	12	12	12	12	12	12
Accounts receivable	17,430	17,011	16,079	16,015	16,066	13,255	10,563	9,561	8,135	9,070	10,002	9,414
Inventories	10,389	10,697	11,408	11,785	11,180	11,348	11,247	11,831	11,776	10,059	9,944	10,595
Other current assets	732	665	598	531	464	397	410	343	276	209	142	75
Total current assets	28,563	28,385	28,097	28,343	27,722	25,012	22,232	21,747	20,199	19,350	20,100	20,096
Property, plant and equipment-net												
Investment in Riceco	2,260	2,856	3,320	3,950	4,438	4,504	3,296	3,326	3,260	1,562	1,647	1,932
Other assets	515	509	503	497	491	485	477	469	461	453	445	437
Total	48,075	49,117	49,772	50,962	51,013	48,438	44,647	44,184	42,467	39,897	40,504	40,532
LIABILITIES AND SHAREHOLDER'S EQUITY												
Current Liabilities												
Accounts payable	7,146	5,709	7,701	8,136	6,932	5,250	4,017	4,002	3,164	2,696	2,812	3,593
Accrued expenses	1,239	813	768	714	611	504	428	428	428	428	405	362
Income taxes payable												
Total current liabilities	8,385	6,522	8,469	8,850	7,543	5,754	4,445	4,430	3,592	3,124	3,217	3,955
Other liabilities	750	750	750	750	750	750	750	750	750	750	750	750
Shareholder's equity:												
Common stock												
Inter-Company debt	38,616	40,868	38,940	39,031	39,812	39,100	36,551	36,043	35,369	33,064	32,992	31,481
Retained earnings	324	977	1,613	2,331	2,908	2,834	2,901	2,961	2,756	2,959	3,545	4,346
Total equity	38,940	41,845	40,553	41,362	42,720	41,934	39,452	39,004	38,125	36,023	36,537	35,827
Total	48,075	49,117	49,772	50,962	51,013	48,438	44,647	44,184	42,467	39,897	40,504	40,532

Cedar Chemical Corporation-West Helena
Projected Statement of Income and Retained Earnings
1998

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
Net sales	5,531	5,247	5,073	5,663	5,594	3,427	3,539	3,103	2,807	4,583	4,237	4,484	53,288
Cost and expenses													
Cost of goods sold	4,976	4,361	4,069	4,599	4,605	3,051	2,901	2,472	2,496	3,663	2,806	2,985	42,984
General and													
Administrative	194	196	201	287	282	263	268	256	255	275	264	268	3,009
Income from Riceco	400	596	464	630	488	66	42	30	(66)	(12)	73	358	3,069
Operating income	761	1,286	1,267	1,407	1,195	179	412	405	(10)	633	1,240	1,589	10,364
Interest expense	265	275	284	295	304	305	308	311	311	316	325	337	3,636
Interest income	10	10	10	10	10	10							60
Income before taxes	506	1,021	993	1,122	901	(116)	104	94	(321)	317	915	1,252	6,788
Income tax expense	182	368	357	404	324	(42)	37	34	(116)	114	329	451	2,442
Net income	324	653	636	718	577	(74)	67	60	(205)	203	586	801	4,346
Beg retained earnings		324	977	1,613	2,331	2,908	2,834	2,901	2,961	2,756	2,959	3,545	
End retained earnings	324	977	1,613	2,331	2,908	2,834	2,901	2,961	2,756	2,959	3,545	4,346	4,346

Cedar Chemical Corporation-West Helena
Projected Statement of Changes in Financial Position
1998

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
Operating activities:													
Net income	324	653	636	718	577	(74)	67	60	(205)	203	586	801	4,346
Items not requiring cash:													
Amortization	6	6	6	6	6	6	8	8	8	8	8	8	84
Depreciation	245	245	245	245	245	245	245	245	245	245	245	245	2,940
Total	575	904	887	969	828	177	320	313	48	456	839	1,054	7,370
Management of operating assets and liabilities:													
Accounts receivable	152	419	932	64	(51)	2,811	2,692	1,002	1,426	(935)	(932)	588	8,168
Inventories	1,912	(308)	(711)	(377)	605	(168)	101	(584)	55	1,717	115	(651)	1,706
Other current assets	(33)	67	67	67	67	67	(13)	67	67	67	67	67	624
Accounts payable	(2,378)	(1,437)	1,992	435	(1,204)	(1,682)	(1,233)	(15)	(838)	(468)	116	781	(5,931)
Accrued expenses	(981)	(426)	(45)	(54)	(103)	(107)	(76)				(23)	(43)	(1,858)
Cash provided (used) by operating activities	(753)	(781)	3,122	1,104	142	1,098	1,791	783	758	837	182	1,796	10,079
Investment activities:													
Additions to property, plant and equipment	(225)	(875)	(730)	(565)	(435)	(320)	(450)	(245)	(150)	(230)	(25)		(4,250)
Inter-company debt	1,371	2,252	(1,928)	91	781	(712)	(2,549)	(508)	(674)	(2,305)	(72)	(1,511)	(5,764)
Cash provided(used) by financing activities	1,371	2,252	(1,928)	91	781	(712)	(2,549)	(508)	(674)	(2,305)	(72)	(1,511)	(5,764)
Increase (decrease) in cash	(7)												(7)
Beginning cash balance	19	12	12	12	12	12	12	12	12	12	12	12	19
Ending cash balance	12	12	12	12	12	12	12	12	12	12	12	12	12

Cedar Chemical Corporation
Capital Expenditures Budget
1998
West Helena Plant

	Jan	Feb	Mar	April	May	June	July	Aug	Sept	Oct	Nov	Dec	Total
PROJECT DESCRIPTION													
SAFETY & HEALTH													
Safety Showers					25								25
PSU, Autoclave Unit 5			30										30
Miscellaneous					50								50
ENVIRONMENTAL													
Aerators								65					65
Storage Tank Vents		50											50
MAINTENANCE OF BUSINESS													
SPECIALTY CUSTOM													
Reactor Replacements				100	110								210
DCA/PROPANIL SUPPORT													
Reactor Replacement (R-4)			300	200									500
S-6601, Pit Replacement											25		25
Tank for Prop Cooling										80			80
T-6203, Sulfuric Acid Storage			75										75
T-6202, Nitric Acid Storage		75	75										150
V-6302, Mixed Acid								80					80
R-6104, re clad, coil replacement					200	150							350
T-6208, crud storage coils									50				50
R-6106, Dist. Vessel Coils							200	50					250
Vent Condensers, Blend Tanks	25												25
GENERAL PLANT													
QC Lab Expansion			100	165									265
R & D Lab					50								50
Office Expansion				100									100
COST IMPROVEMENTS													
2,3 Centrifuge	150	250											400
Condensate Return							100			150			250

Cedar Chemical Corporation
Capital Expenditures Budget

1998

West Helena Plant

	Jan	Feb	Mar	April	May	June	July	Aug	Sept	Oct	Nov	Dec	Total
Hydrogen/Zero Air Generators						20							20
Miscellaneous	50	50											100
MAJOR CEDAR & TOLL PROJECTS													
Power Distribution						150	150						300
Change Room Expansion								50	100				150
RR Spur Expansions		150	50										200
Ethephon		200											200
BFG 85% on Stream		100	100										200
Total spending	225	875	730	565	435	320	450	245	150	230	25		4,250

**CEDAR CHEMICAL CORPORATION
ORGANICS DIVISION
FIVE YEAR FORECAST**

GENERAL OVERVIEW

Results for the five (5) year period reflect the 1992 Organics Strategy implementation with subsequent modifications. Pretax income will grow from \$1.8MM in 1997 to over \$12.0MM in 2002 with cumulative pretax income of over \$50MM for the period 1998-2002, remarkable results for a small, generic manufacturer of agricultural intermediates for ourselves and others and of a limited number of proprietary pesticides. This forecast validates the commitment of management and the confidence of TRI to the Organics business and this management team, especially after the poor results for 1996.

Like the 1998 budget, the five (5) year plan is very aggressive. It assumes no significant negative factors and only positive improvements, perhaps somewhat optimistic, but we believe possible with good product stewardship and management attention. To put it into perspective, the cumulative pretax income in this plan is about \$16MM more than even the upside plan presented last fall.

In Pesticides, by far the most significant improvement over the prior plan is the implementation of Riceco. Because of the manner in which sales to Riceco and income from Riceco are accounted for, it is not possible to compare individual product groupings directly to the prior plan. It is, however, clear that expectations for Riceco are very high.

We also anticipate very good improvement in other Pesticide products due to expected contractual improvements in ethephon sales and improved manufacturing cost position in diuron over the period.

Specialty Chemicals continues to track the strategy implemented during late 1996 and 1997. Short term benefits of the FMC project are realized, but in the later years there is more speculation in the sales forecast with over one third of the sales unidentified at this time. Changes in the manner of interest and plant overhead allocation, although thought to be more appropriate, have a significant negative impact on overall financial results for Specialties. In spite of this, operating income tracks the prior forecast very closely.

PROPANIL

Riceco is fully operational during the period with improvement projected in both sales prices and product mix. The plan assumes new combination product additions which will improve mar

gins as well as increase use of propanil. Price increases are assumed to be about 2.5% per year. Although gross margin of sales to Riceco are flat during the period, the income from Riceco grows from about \$2.0MM in 1998 to over \$5.0MM by 2002 in spite of continued pressure from competing products and threats from other potential propanil producers in China, India, and Brazil. It is assumed that the new combination products and additional products that might be sold by Riceco more than offset any reduction due to competitive factors, a bold assumption.

The plan also benefits from an extension of the Rohm and Haas domestic propanil supply agreement with financial improvements as well as a new agreement to supply Rohm and Haas both DCA and propanil in Europe.

OTHER PRODUCTS

Significant improvements are seen during the period as a result of a new ethephon supply agreement involving both Rhone-Poulenc and Micro Flo, Cedar's former customer. Through an assignment of the supply agreement with Micro Flo to Rhone-Poulenc and associated production of ethephon and other products for Rhone-Poulenc, gross margin will improve over the prior plan by about \$750M to \$1,000M per year.

Diuron prices are expected to improve about 3.5% per year as the market is rationalized somewhat following the DuPont-Griffin deal. Additionally, in an effort to enhance the relationship between Rhone-Poulenc and Cedar, Rhone-Poulenc will reduce the cost of diuron raw material (DCPI) temporarily after which Cedar will have a new tolling agreement in place for domestic phosgenation.

The only problem area for Other Pesticide Products will be the Butoxone product line. New competitive chemistry, a declining market, a new competitor, lack of a full marketing staff (after Riceco), and concerns over product safety will continue the decline experienced during 1997. The plan assumes the sale of the product line by the year 2001; it could be sooner if the right opportunity presents itself.

Overall results for Other Products shows good improvement in gross margin from \$1.8MM to over \$4.5MM by the year 2002, more than doubling the prior forecast, excluding the sale of Butoxone.

TOTAL PESTICIDES

Total sales of Pesticides will remain flat during the period due to flat sales to Riceco and sale of the Butoxone product line. Operating income will, however, grow from \$7.5MM to \$13.0MM, a very aggressive plan and over double the prior five year forecast. In addition to the improvements listed above, Pesticides will benefit from a reallocation of plant overhead, Corporate Administrative charges, and interest, all of which we believe more accurately reflect the state of the business today and for the plan period. As a result, Pesticides will contribute \$45.7MM to pretax income over the five (5) year period, an improvement of over \$35MM for the period compared to the prior forecast.

SPECIALTY CHEMICALS

The long range commitment to Specialty Chemicals, especially Custom Manufacturing, pays off in the five year plan. Although the present plan is consistent with the prior plan and the Custom Manufacturing Strategy implemented late last year, the success is hidden somewhat because of reallocation of overheads and interest.

THAM results are consistent with the prior plan. The strategy of gradually growing market share while avoiding a reaction from the competition continues. Gross margin, however, remains flat as prices also remain flat while costs increase about 2.5% per year. Sales of 2,3-DCNB from the prior plan have been dropped due to continued problems with 2,3-DCNB purity from isomer separation and no justification for further improvement at this time. This reduces gross margin about \$250M per year.

Custom Manufacturing sales are actually down somewhat from the prior plan but gross margin is up from about \$11MM to \$14MM for the period due to the opportunistic results of the FMC project for 1998 and 1999. The sales forecast for last year was more speculative and thus, a little higher than the present plan. The plan assumes that both Zeneca and BFG contracts continue, but FMC terminates during 1999. In the latter years, approximately 35-40% of the sales forecast is from unidentified projects and assumes that those projects can be consummated with little disruption to sales. Based on the Custom Manufacturing strategy and present level of business opportunities, we believe that to be possible. Some capital investment, as yet unidentified, will probably be required.

Overall, Specialty Chemicals will contribute \$13.3MM in operating income for the five years compared to the prior forecast of

\$12.3MM. Pretax income will drop from about \$8.1MM to \$4.7MM, however, as a result of reallocation of interest and overhead expenses to the benefit of Pesticides.

SG&A EXPENSE

Total SG&A will decrease by \$8.6MM during the five year period compared to the prior forecast, a major contributor to the overall improvement. Over \$1.5MM per year in SG&A expenses was eliminated by the creation of Riceco. Direct expenses for SG&A is assumed to increase 2.5% while Corporate Administrative expense is assumed to remain flat.

INTEREST EXPANSE

Interest expense is based on use of assets. The allocation between Pesticides and Specialties has been recalculated with a significant drop in Pesticides and a corresponding increase in Specialties. Total interest is projected at \$3.5MM to \$3.9MM per year, about the same as the prior forecast.

CAPITAL EXPENDITURES

Capital expenditures over the period will run \$3.0MM to \$4.0MM per year, an increase from the prior plan, primarily to further improve plant reliability and infrastructure, i.e., labs, rail siding, etc. We also anticipate further expansion of our DCA facility in order to supply all of Riceco's needs as well as the remaining Cedar needs for propanil for Rohm and Haas and diuron. There is no money in the plan for new Custom projects as we have no definition of probable costs without having a better feel for the specific projects. It is likely that additional funds will be required, particularly if we expand the Custom business beyond the present plan.

WEST HELENA PLANT

STATEMENT OF INCOME

	1996 Actual			YTD 12/31/97 Est.			1998 Budget			1999 FORECAST			2000 FORECAST			2001 FORECAST			2002 FORECAST		
	Qty	Unit Price	Total	Qty	Unit Price	Total	Qty	Unit Price	Total	Qty	Unit Price	Total	Qty	Unit Price	Total	Qty	Unit Price	Total	Qty	Unit Price	Total
DCA/Propanil:																					
DCA	1,082.4	1.33	1,439	842.1	1.42	1,193	725.0	1.55	1,124	700.0	1.50	1,050	800.0	1.45	1,160	900.0	1.50	1,350	1,000.0	1.55	1,550
Propanil Tech lbs	2,784.9	2.17	6,038	1,470.2	1.52	2,235	1,875.0	1.44	2,700	1,950.0	1.52	2,964	1,900.0	1.51	2,869	1,850.0	1.54	2,849	1,750.0	1.49	2,608
Flaked Tech lbs	1,902.1	1.33	2,535	3,497.8	1.55	5,425	4,068.1	1.45	5,889	2,480.0	1.45	3,600	2,050.0	1.46	3,002	1,750.0	1.50	2,627	1,450.0	1.51	2,185
Whem gts	180.0	13.20	2,376	357.7	13.99	5,003	400.4	9.60	3,844	525.0	9.93	5,213	575.0	9.89	5,687	600.0	10.01	6,008	575.0	9.83	5,652
55% Blend lbs							244.3	1.50	366												
4# Propanil gts	335.2	12.60	4,224	384.5	11.06	4,031	652.2	9.53	6,216	600.0	9.84	5,904	575.0	9.80	5,635	575.0	9.83	5,710	550.0	9.75	5,363
3# Propanil gts	440.8	7.98	3,517	495.3	8.07	3,998	668.3	7.96	5,313	625.0	8.35	5,219	600.0	8.32	4,992	550.0	8.41	4,626	500.0	8.28	4,140
Stam lbs	633.1	10.68	6,761	584.3	9.78	5,712	395.0	8.98	3,537	600.0	7.15	4,287	580.0	7.30	4,236	550.0	7.47	4,107	510.0	7.53	3,853
Misc.			24			-130															
Sub-Total Net Sales			26,915			27,487			26,989			26,237			27,581			27,274			25,390
Cost of Goods Sold			21,971			21,881			24,179			23,400			23,407			23,311			22,409
Gross Margin			4,944			5,586			2,810			2,837			4,174			3,963			2,981
Gross Margin %			18.4%			20.3%			16.6%			17.1%			15.1%			14.5%			11.7%
Other Products:																					
Diuron lbs	2,438.5	2.71	6,605	2,192.7	2.58	5,668	1,950.0	2.75	5,383	2,250.0	2.80	6,300	2,500.0	2.90	7,250	2,750.0	3.10	8,525	3,000.0	3.20	9,600
Diuron Col lbs	234.3	2.10	491																		
Bandit gts	2.9	17.24	50																		
Tough gts			-1																		
Pluck cs	95	-9.39	-892																		
Ethephon lbs	344.2	3.30	1,138	1,283.5	1.93	2,483	2,250.0	1.15	2,588	1,250.0	1.45	1,813	1,250.0	1.55	1,938	1,250.0	1.85	2,083	1,250.0	1.75	2,188
Sale of Butoxone																					
Butoxone 175 gts	37.3	23.07	861	33.8	18.89	639	50.0	18.48	823	40.0	18.50	740	30.0	17.50	525						
Butoxone 200 gts	25.8	21.87	559	27.0	20.87	564	32.0	18.68	597	30.0	21.00	630	20.0	20.00	400						
Butoxone 750 lbs	10.4	20.24	209	7.8	13.46	105	30.0	14.60	438	20.0	12.50	250	10.0	11.75	118						
Sub-Total Net Sales			9,018			9,458			9,807			9,733			10,230			10,588			11,788
Cost of Goods Sold			9,985			8,433			8,158			7,219			7,060			6,326			7,050
Gross Margin			-967			1,025			1,649			2,514			3,170			4,263			4,738
Gross Margin %			-10.7%			10.8%			16.8%			25.8%			31.0%			40.3%			40.2%
Total Pesticides																					
Net Sales			35,933			35,925			36,796			37,970			37,811			37,862			37,178
Cost of Goods Sold			31,956			30,314			32,338			30,619			30,487			29,636			29,459
Gross Margin			3,977			5,611			4,459			7,351			7,324			8,226			7,719
Gross Margin %			11.1%			16.6%			16.6%			19.4%			19.4%			21.7%			20.8%
Sale of Product Line S, G & A																		2,000			
Direct			2,402			2,084			1,723			1,775			1,828			1,883			1,939
Allocated			587			540			283			290			291			293			293
Total SG&A			2,990			2,604			2,006			2,065			2,119			2,176			2,232
Joint Venture Income						485			3,069			3,977			3,947			4,852			5,534
Operating Income			887			4,493			7,522			9,263			9,172			12,912			11,621
Interest			2,412			2,689			2,267			2,334			2,381			2,429			2,477
Pretax Income			-1,425			1,794			5,255			6,929			6,791			10,483			8,544

	1996 Actual			YTD 12/31/97 Est.			1998 Budget			1999 FORECAST			2000 FORECAST			2001 FORECAST			2002 FORECAST		
	Qty	Unit Price	Total	Qty	Unit Price	Total	Qty	Unit Price	Total	Qty	Unit Price	Total	Qty	Unit Price	Total	Qty	Unit Price	Total	Qty	Unit Price	Total
Specialty Chemical																					
TA lbs	480.2	5.35	2,569	603.6	5.07	3,061	600.0	5.12	3,072	650.0	5.25	3,411	700.0	5.38	3,765	750.0	5.51	4,135	800.0	5.65	4,521
Trometamol lbs	0.4	9.75	4	3.2	5.94	19															
Sub-Total Net Sales			2,573			3,080			3,072			3,411			3,765			4,135			4,521
Cost of Goods Sold			2,623			2,782			2,273			2,398			2,527			2,640			2,768
Gross Margin			-50			298			799			1,013			1,238			1,495			1,753
Gross Margin %			-1.9%			9.7%			26.0%			29.7%			32.9%			36.2%			38.9%
Custom Manufacturing:																					
Acidfluorin lbs	297.9	3.75	1,116	1,693.4	2.05	3,469	1,983.8	1.81	3,590	2,200.0	1.92	4,220	2,429.0	1.96	4,760	2,672.0	2.01	6,370	2,939.0	2.08	6,054
BFG lbs	4,798.3	0.29	1,397	7,505.8	0.30	2,220	6,875.0	0.23	1,600	9,000.0	0.23	2,060	10,720.0	0.21	2,251	12,155.0	0.21	2,613	12,670.0	0.22	2,831
Butyl Chloride lbs	284.4	0.41	116	274.1	0.40	111															
Cypermethrin lbs	178.1	4.29	764																		
Dehpa lbs	970.1	0.42	409																		
Graphize lbs	2,002.7	0.56	1,131																		
Permethrin lbs	67.9	3.34	227	189.4	3.20	624															
FMC-5/Nitro lbs							471.0	10.55	4,969	581.0	6.10	3,546									
Unidentified Unit 1															2,722			2,790			2,860
Unidentified Unit 5												2,057			3,172			2,968			3,041
Other						163	630.0	2.00	1,260												
Sub-Total Net Sales			5,160			6,587			11,419			11,893			12,905			13,741			14,786
Cost of Goods Sold			6,355			5,924			8,372			10,684			11,017			11,347			11,697
Gross Margin			-1,195			663			3,047			1,219			1,888			2,394			3,089
Gross Margin %			-23.2%			10.1%			26.7%			10.3%			14.6%			17.4%			20.9%
Total Specialty/Custom																					
Net Sales			7,733			9,667			14,491			15,294			16,670			17,676			19,307
Cost of Goods Sold			8,978			8,708			10,648			13,062			13,544			13,987			14,465
Gross Margin			-1,245			961			3,843			2,232			3,126			3,689			4,842
Gross Margin %			-16.1%			14.5%			26.5%			14.6%			18.8%			21.6%			25.1%
S, G & A																					
Direct			355			448			891			918			945			974			1,003
Allocated			65			60			112			117			128			138			152
Total SG&A			420			508			1,003			1,035			1,073			1,112			1,155
Operating Income			-1,665			453			2,842			1,167			2,053			2,777			3,687
Interest			288			302			1,309			1,313			1,339			1,368			1,393
Pretax Income			-1,933			152			1,533			-116			713			1,411			2,294
Environmental (Info Only)																					
			128			80			230												
<i>(Note: Shown in Propanil Domestic C.O.S.)</i>																					
Total Organics																					
Net Sales	% Sales		43,666	% Sales		48,592	% Sales		53,288	% Sales		53,284	% Sales		54,481	% Sales		55,738	% Sales		56,485
Cost of Goods Sold	83.7%		40,834	83.7%		39,020	80.7%		42,884	82.0%		43,681	80.8%		44,011	78.3%		43,823	77.8%		43,824
Gross Margin	6.3%		2,732	16.3%		7,572	19.3%		10,304	18.0%		9,583	19.2%		10,470	21.7%		12,115	22.2%		12,561
Sale of Product Line																					
S, G & A																					
Direct	6.3%		2,757	5.4%		2,512	4.9%		2,614	5.1%		2,693	5.1%		2,773	5.1%		2,857	5.2%		2,942
Allocated	1.5%		652	1.3%		600	0.7%		395	0.8%		407	0.8%		419	0.8%		431	0.8%		445
Total S,G&A			3,410			3,112			3,009			3,100			3,192			3,288			3,387
Joint Venture Income				1.0%		485	5.8%		3,069	9.1%		3,977	9.0%		3,847	11.1%		4,662	12.6%		5,534
Operating Income	-1.6%		-678	10.6%		4,946	19.4%		10,364	19.6%		10,460	20.6%		11,225	28.1%		15,689	28.0%		14,708
Interest	6.1%		2,680	6.4%		3,000	6.7%		3,578	6.8%		3,647	6.8%		3,720	6.8%		3,785	6.9%		3,870
Income Before Tax	-7.7%		-3,358	4.2%		1,948	12.7%		8,788	12.8%		8,813	13.8%		7,554	21.3%		11,894	19.2%		10,838

Bayer - DCA

Load Jan

	Date	Inv #	RR#	Drms	Net	Lbs	US\$	Per # Price
DCA Purchase	1/12/98	3041757	11028			43,740	80,481.60	1.840
DCA Purchase	1/12/98	3041775	11082			44,445	81,778.80	1.840
DCA Purchase	1/12/98	3041772	11063			44,181	81,293.04	1.840
DCA Purchase	1/16/98	3041766	11089			42,064	77,397.76	1.840
DCA Purchase	1/16/98	3041765	11090			43,034	79,182.56	1.840
DCA Purchase	1/22/98	3041770	11130			42,990	79,101.60	1.840
DCA Purchase	1/23/98	3041780	11165			44,754	82,347.36	1.840
DCA Purchase	1/23/98	3041778	11169			42,417	78,047.28	1.840
DCA Purchase	1/18/98	3041773	11129			43,078	79,263.52	1.840
DCA Purchase	1/23/98	3041784	11188			41,888	77,073.92	1.840
DCA Purchase	2/5/98	3041783	11191			41,447	76,262.48	1.840
						474,038		
Ocean Freight	1/24/98	41005					5,142.50	0.011
Ocean Freight	1/7/98	41004					5,579.50	0.012
Ocean Freight	12/9/97	41003					6,509.00	0.014
Ocean Freight	12/5/97	41002					4,599.50	0.010
Ocean Freight	1/28/98	53293					3,030.32	0.006
Duty	12/31/97	53080					7,119.50	0.015
Duty	11/8/97	41001					4,165.00	0.009
Inland Freight	3/13/98	41008					2,389.50	0.005
Containers Renta	2/28/98	982102945					1,092.00	
Total Cost delivered to Plant							911,856.74	1.924

Accounting:	\$ Dollars	Unit Cst
C153-5910	873,321.92	
C153-5920	38,534.82	
Total	474,038	911,856.74
		1.924



REMIT TO:
BAYER CORPORATION
 P.O. BOX 75662
 CHARLOTTE, NC 28275-5662

FIBERS ORGANICS AND RUBBER DIV
 100 BAYER ROAD
 PITTSBURGH, PA. 15205

ORDER INVOICE
 BILL TO: 005761-001

NO: 3041757

DATE: 01-12-98 CO-21 DIV-10 DP-0012
 SHIP TO: 005761-001

CEDAR CHEMICAL CORP
 P.O. BOX 2749
 W HELENA AR 72390

West Helena Acct Dept.

CEDAR CHEMICAL CORP
 HWY 242 S
 W HELENA AR 72390

RECEIVED
 JAN 15 1998
RECEIVED

1-9-98
 11028

PLEASE RETURN THE "DUPLICATE INVOICE" COPY WITH
 REMITTANCE TO INSURE PROPER PAYMENT IS APPLIED TO YOUR
 ACCOUNT.

INVOICE

PURCHASE ORDER #: 04-087455
 FOB: NEW ORLEANS, LA

ORDER INVOICE NO: 3041757 DATE: 01-12-98
 FREIGHT: COLLECT DATE SHIPPED: 01-02-98

ITEM	CODES	DESCRIPTION	QUANTITY	UNIT PRICE	AMOUNT
01	N826	3,4-DICHLOROANILINE, PURE	43,740.00	1.84	80,481.60

080081 06Y63642
 BULK CONT: SNIU121295 GW: 50,000 TW: 6,260 NW: 43,740 (CBS)

ENTERED
 JAN 30 1998
 WEST HELENA

SEND A CERTIFICATE OF DELIVERY OF IMPORTED MERCHANDISE TO THE
 ATTENTION OF MR BOB CHRISTIAN; CEDAR CHEMICAL CORP; PO BOX
 2749; WEST HELENA, AR 72390. SPECIAL PRICING APPLIES

E 80,481.60

VENDOR #		INVOICE #	
2987		3041757	
P.O. #	REC. RPT #	INV. CD	INV. DATE
87455		1	011298
TERMS CODE	DUE DATE	FRT BILL CD	SALES ORDER #
3			
INVOICE AMT		DISC ALLOWED	
80,481.60			
GL NUMBER	AMOUNT	WORK ORDER #	
C1535910	80,481.60		
DONE BY		DATE	APPROVED BY
RK		1-28-98	[Signature]
ENTERED BY			

160

LAST PAGE
 RATTON **0080

IF IN YOUR PURCHASE ORDER YOUR ORDER IS ACCEPTED
 NO SUCH CONTRACT EXISTS YOUR ORDER IS ACCEPTED
 TERMS AND CONDITIONS PRINTED ON THE REVERSE SIDE

RAW MATERIAL RECEIVING RECORD

11728

CEDAR CHEMICAL 9000-1 REV: C

TIME IN AT GATE
0840

RECEIVED BY
B. McQuinn

SECTION 1

DATE: 1-3-98 ORDER NO.: N/A CAR OR TRUCK NO.: S/C# SNEU-181295-0 DECLARED WEIGHT: Net N/A 43739

SHIPPER: Bayer Corp CARRIER: Triple E

QUANTITY	CONTAINER	DESTINATION	RAW MAT CODE #	DESCRIPTION
1	S/C	Unit #6	40100 (3rd Party)	DCA

COMMENTS
DCA was fax to Cedar Lab, Per, V. FOSTER

SECTION 2

RECIPIENT: M. Knight TIME SAMPLE/CERTIFICATE TAKEN TO LAB: 7:50

UNLOADED AT (tank number, unit, warehouse, etc.): S/C Unit #6

COMMENTS

SECTION 3

LAB TECHNICIAN: [Signature] ACCEPT: [check] REJECT: REASON FOR REJECTION:

COMMENTS

99.9

SECTION 4

PLANT SUPERVISOR: [Signature] ACCEPT: [check] REJECT: REASON FOR REJECTION:

PLANT WEIGHT: NET UNLOADING TIMES

START TIME: 0950 1/3A7 END TIME: [Signature]

COMMENTS



West Helena Arr. Dent

REMIT TO:
BAYER CORPORATION
P.O. BOX 75662
CHARLOTTE, NC 28275-5662

RECEIVED
JAN 15 1998
RECEIVED

FIBERS ORGANICS AND RUBBER DIV
100 BAYER ROAD
PITTSBURGH, PA. 15205

ORDER INVOICE
BILL TO: 005761-001

NO: 3041775

DATE: 01-12-98 CO-21 DIV-10 DP-0012
SHIP TO: 005761-001

CEDAR CHEMICAL CORP
P.O. BOX 2749
W HELENA AR 72390

CEDAR CHEMICAL CORP
HWY 242 S
W HELENA AR 72390

1-9-98
11062

INVOICE

PLEASE RETURN THE "DUPLICATE INVOICE" COPY WITH
REMITTANCE TO INSURE PROPER PAYMENT IS APPLIED TO YOUR
ACCOUNT

PURCHASE ORDER #: 04-087455
FOB: NEW ORLEANS, LA

ORDER INVOICE NO: 3041775 DATE: 01-12-98
FREIGHT: COLLECT DATE SHIPPED: 01-08-98

ITEM	CODES	DESCRIPTION	QUANTITY	UNIT PRICE	AMOUNT
01	N826	3,4-DICHLOROANILINE, PURE	44,445.00	1.84	81,778.80

080081 06Y63650
BULK CONT: SNIU121110 GW: 50,000 TW: 5,555 NW: 44,445 (LBS)
ASSAY%100.00

SEND A CERTIFICATE OF DELIVERY OF IMPORTED MERCHANDISE TO THE
ATTENTION OF MR BOB CHRISTIAN; CEDAR CHEMICAL CORP; PO BOX
2749; WEST HELENA, AR 72390. SPECIAL PRICING APPLIES

JAN 30 1998

WEST HELENA

E 81,778.80

VENDOR #		INVOICE #	
2987		3041775	
PO #	REC RPT #	INV. CD	INV DATE
87455		1	011298
TERMS CODE	DUE DATE	FRT BILL CD	SALES ORDER #
2			
INVOICE AMT		DISC ALLOWED	
81,778.80			
GL NUMBER	AMOUNT	WORK ORDER #	
C153 5910	81,778.80	A	
		92	

LAST PAGE
RATION

**0082

ED IN YOUR PURCHASE ORDER YOUR ORDER IS ACCEPTED
NO SUCH CONTRACT EXISTS. YOUR ORDER IS ACCEPTED
TERMS AND CONDITIONS PRINTED ON THE REVERSE SIDE

AB0000079480

RAW MATERIAL RECEIVING RECORD

11062

CEDAR CHEMICAL 9000-1 REV: C

TIME IN AT GATE 0620	SECTION 1	RECEIVED BY <i>DL</i>
--------------------------------	-----------	--------------------------

DATE 1/9/98	ORDER NO. 04-087435	CAR OR TRUCK NO. SNV121110-5	DELIVERED WEIGHT Net NA 44445
-----------------------	-------------------------------	--	---

SHIPPER Bayer	CARRIER Triple E
-------------------------	----------------------------

QUANTITY	CONTAINER	DESTINATION	RAW MAT CODE #	DESCRIPTION
1	S/C	unit 6	40100	DCA

COMMENTS
C of A was faxed

SECTION 2

RECIPIENT <i>J. Kinsler</i>	TIME SAMPLE/CERTIFICATE TAKEN TO LAB 7:50
--------------------------------	---

UNLOADED AT (tank number, unit, warehouse, etc.)

COMMENTS

Loaded at 7:21 To unload at 9:45 later date

SECTION 3

LAB TECHNICIAN	ACCEPT	REJECT	REASON FOR REJECTION
<i>YJ</i>	<input checked="" type="checkbox"/>		

COMMENTS
**DCA 99.7
H2O .02**

SECTION 4

SHIFT SUPERVISOR	ACCEPT	REJECT	REASON FOR REJECTION
<i>McBride</i>	<input checked="" type="checkbox"/>		

PLANT WEIGHT	UNLOADING TIMES	
NET	START TIME 0800	END TIME

COMMENTS



West Helena Acct. Dept.

REMIT TO:
BAYER CORPORATION
P.O. BOX 75662
CHARLOTTE, NC 28275-5662

RECEIVED
JAN 15 1998
RECEIVED
NO. 3041772

FIBERS ORGANICS AND RUBBER DIV
100 BAYER ROAD
PITTSBURGH, PA. 15205

ORDER INVOICE
BILL TO: 005761-001

DATE: 01-12-98 CO-21 DIV-10 DP-0012
SHIP TO: 005761-001

CEDAR CHEMICAL CORP
P.O. BOX 2749
W HELENA AR 72390

CEDAR CHEMICAL CORP
HWY 242 S
W HELENA AR 72390

1-9-98
11063

INVOICE

PLEASE RETURN THE "DUPLICATE INVOICE" COPY WITH
REMITTANCE TO INSURE PROPER PAYMENT IS APPLIED TO YOUR
ACCOUNT

PURCHASE ORDER #: 04-087455
FOB: NEW ORLEANS, LA

ORDER INVOICE NO: 3041772 DATE: 01-12-98
FREIGHT: COLLECT DATE SHIPPED: 01-08-98

ITEM	CODES	DESCRIPTION	QUANTITY	UNIT PRICE	AMOUNT
01	N826	3,4-DICHLOROANILINE, PURE	44,181.00	1.84	81,293.04

080081 06Y63648
BULK CONT: SNIU121333 GW: 50,000 TW: 5,819 NW: 44,181 (EBS)
ASSAY: 100.00

ENTERED

SEND A CERTIFICATE OF DELIVERY OF IMPORTED MERCHANDISE TO THE
ATTENTION OF MR BOB CHRISTIAN; CEDAR CHEMICAL CORP; PO BOX
2749; WEST HELENA, AR 72390. SPECIAL PRICING APPLIES

JAN 30 1998

WEST HELENA

VENDOR #		INVOICE #	
2987		3041772	
P.O. #	REC. RPT. #	INV CD	INV DATE
87455		1	011298
TERMS CODE	DUE DATE	FRT BLI CD	SALES ORDER #
2			
INVOICE AMT.		DISC ALLOWED	
81,293.04			
GL NUMBER	AMOUNT	WORK ORDER #	
C 1535910	81,293.04		
DONE BY	DATE	APPROVED BY	ENTERED BY

E 81,293.04

LAST PAGE
LATION **0081

ED IN YOUR PURCHASE ORDER YOUR ORDER IS ACCEPTED
NO SUCH CONTRACT EXISTS YOUR ORDER IS ACCEPTED
TERMS AND CONDITIONS PRINTED ON THE REVERSE SIDE

RAW MATERIAL RECEIVING RECORD

11'63

CEDAR CHEMICAL 9000-1 REV: C

TIME IN AT GATE
0620

RECEIVED BY
DW

SECTION 1

DATE	ORDER NO.	CAR OR TRUCK NO.	DECLARED WEIGHT
<i>1/9/98</i>	<i>04-087455</i>	<i>SNIU121333-0</i>	Net <i>NA 44092</i>

SHIPPER	CARRIER
<i>Bayer</i>	<i>Triple E</i>

QUANTITY	CONTAINER	DESTINATION	RAW MAT CODE #	DESCRIPTION
<i>1</i>	<i>S/C</i>	<i>unit 6</i>	<i>40100</i>	<i>DCA</i>

COMMENTS
C of A was failed

SECTION 2

RECIPIENT	TIME SAMPLE/CERTIFICATE TAKEN TO LAB
<i>J. Kungler</i>	<i>07:50</i>

UNLOADED AT (tank number, unit, warehouse, etc.)

COMMENTS
Unloaded at T0211 To unload at a later date

SECTION 3

LAB TECHNICIAN	ACCEPT	REJECT	REASON FOR REJECTION
<i>SV</i>	<input checked="" type="checkbox"/>		

COMMENTS
*DCA 99.17
H2O .02*

SECTION 4

PLANT SUPERVISOR	ACCEPT	REJECT	REASON FOR REJECTION
<i>W. B. De</i>	<input checked="" type="checkbox"/>		

PLANT WEIGHT	UNLOADING TIMES	
NET	START TIME <i>0805</i>	END TIME

COMMENTS



REMIT TO:
BAYER CORPORATION
 P.O. BOX 75662
 CHARLOTTE, NC 28275-5662

FIBERS ORGANICS AND RUBBER DIV
 100 BAYER ROAD
 PITTSBURGH, PA. 15205

ORDER INVOICE
 BILL TO: 005761-001

NO: 3041766

DATE: 01-16-98 CO-21 DIV-10 DP-0012
 SHIP TO: 005761-001

CEDAR CHEMICAL CORP
 P.O. BOX 2749
 W HELENA AR 72390

West Helena Acct. Dept.

CEDAR CHEMICAL CORP
 HWY 242 S
 W HELENA AR 72390

RECEIVED
 JAN 23 1998
RECEIVED

1-12-98
 11089

PLEASE RETURN THE "DUPLICATE INVOICE" COPY WITH
 REMITTANCE TO INSURE PROPER PAYMENT IS APPLIED TO YOUR
 ACCOUNT

INVOICE

PURCHASE ORDER #: 04-087455
 FOB: NEW ORLEANS, LA

ORDER INVOICE NO: 3041766 **DATE: 01-16-98**
FREIGHT: COLLECT **DATE SHIPPED: 01-13-98**

ITEM	CODES	DESCRIPTION	QUANTITY	UNIT PRICE	AMOUNT
01	N826	3,4-DICHLOROANILINE, PURE	42,064.00	1.84	77,397.76

080081 06Y63646
 BULK CONT: SNIU121059 GW: 50,000 IW: 7,936 NW: 42,064 (LBS) ENTERED
 ASSAYZ100.00

JAN 30 1998

SEND A CERTIFICATE OF DELIVERY OF IMPORTED MERCHANDISE TO THE
 ATTENTION OF MR BOB CHRISTIAN; CEDAR CHEMICAL CORP; PO BOX
 2749; WEST HELENA, AR 72390. SPECIAL PRICING APPLIES

W. HELENA

VENDOR #		INVOICE #	
2987		3041766	
P.O. #	REC RPT. #	INV. CD	INV DATE
87455		1	011698
TERMS CODE	DUE DATE	FRT BILL CD	SALES ORDER #
2			
INVOICE AMT.		DISC ALLOWED	
77,397.76			
GL NUMBER	AMOUNT	WORK ORDER #	
C153 5910	77,397.76		
DONE BY		DATE	APPROVED BY
DR			
		ENTERED BY	

77,397.76

LAST PAGE
 ATION

**0068

IF IN YOUR PURCHASE ORDER, YOUR ORDER IS ACCEPTED
 NO SUCH CONTRACT EXISTS YOUR ORDER IS ACCEPTED
 TERMS AND CONDITIONS PRINTED ON THE REVERSE SIDE

Corporation, Pittsburgh, PA 15205 000079480



REMIT TO:

BAYER CORPORATION
P.O. BOX 75662
CHARLOTTE, NC 28275-5662

FIBERS ORGANICS AND RUBBER DIV
100 BAYER ROAD
PITTSBURGH, PA. 15205

ORDER INVOICE
BILL TO: 005761-001

NO: 3041765

DATE: 01-16-98 CO-21 DIV-10 DP-0012
SHIP TO: 005761-001

CEDAR CHEMICAL CORP
P.O. BOX 2749
W HELENA AR 72390

West Helena Acct. Dept.

CEDAR CHEMICAL CORP
HWY 242 S
W HELENA AR 72390

RECEIVED
JAN 23 1998
RECEIVED

1-12-98
11090

INVOICE

PLEASE RETURN THE "DUPLICATE INVOICE" COPY WITH
REMITTANCE TO INSURE PROPER PAYMENT IS APPLIED TO YOUR
ACCOUNT

PURCHASE ORDER #: 04-087455
FOB: NEW ORLEANS, LA

ORDER INVOICE NO: 3041765 DATE: 01-16-98
FREIGHT: COLLECT DATE SHIPPED: 01-13-98

ITEM	CODES	DESCRIPTION	QUANTITY	UNIT PRICE	AMOUNT
01	N826	3,4-DICHLOROANILINE, PURE	43,034.00	1.84	79,182.56

080081 06Y63645
BULK CONT: SNIU121058 GW: 50,000 TW: 6,966 NW: 43,034 (LBS)
ASSAY%100.00

ENTERED
JAN 30 1998

SEND A CERTIFICATE OF DELIVERY OF IMPORTED MERCHANDISE TO THE
ATTENTION OF MR BOB CHRISTIAN; CEDAR CHEMICAL CORP; PO BOX
2749; WEST HELENA, AR 72390. SPECIAL PRICING APPLIES

VENDOR #		INVOICE #	
2987		3041765	
P.O #	REC RPT #	INV CD	INV DATE
87455		1	011698
TERMS CODE	DUE DATE	FRT BILL CD	SALES ORDER #
2			
INVOICE AMT		DISC ALLOWED	
79,182.56			
GL NUMBER	AMOUNT	WORK ORDER #	
01535910	79,182.56		
DATE	APPROVED BY	ENTERED BY	
1-28-98	DTW	927	

79,182.56

LAST PAGE
TION

**0067

IN YOUR PURCHASE ORDER YOUR ORDER IS ACCEPTED
IF SUCH CONTRACT EXISTS, YOUR ORDER IS ACCEPTED
TERMS AND CONDITIONS PRINTED ON THE REVERSE SIDE

Corporation, Pittsburgh, PA 15205-9741

AB0000079480

RAW MATERIAL RECEIVING RECORD

No 11090

CEDAR CHEMICAL 9000-1 REV: C

TIME IN AT GATE
0430

RECEIVED BY
DLW

SECTION 1

DATE	ORDER NO.	CAR OR TRUCK NO.	DECLARED WEIGHT
1/12/98	04-087455	SN1U121058-3	Net NA 43034

SHIPPER	CARRIER
Bayan	Triple E

QUANTITY	CONTAINER	DESTINATION	RAW MAT CODE #	DESCRIPTION
1	S/C	unit 6	3020	DCA

COMMENTS
C of A was filed

SECTION 2

RECIPIENT	TIME SAMPLE/CERTIFICATE TAKEN TO LAB
The oil	5:40

UNLOADED AT (tank number, unit, warehouse, etc.)
driped at unit 6 with 100% (unloaded) - 100%

COMMENTS

SECTION 3

LAB TECHNICIAN	ACCEPT	REJECT	REASON FOR REJECTION
EP	✓		

COMMENTS

SECTION 4

LAB SUPERVISOR	ACCEPT	REJECT	REASON FOR REJECTION
gmat	✓		

PLANT WEIGHT	UNLOADING TIMES	
NET	START TIME	END TIME

COMMENTS



REMIT TO:
 BAYER CORPORATION
 P.O. BOX 75662
 CHARLOTTE, NC 28275-5662

FIBERS ORGANICS AND RUBBER DIV
 100 BAYER ROAD
 PITTSBURGH, PA. 15205

ORDER INVOICE
 BILL TO: 005761-001

NO: 3041770

DATE: 01-22-98 CD-21 DIV-10 DP-0012
 SHIP TO: 005761-001

CEDAR CHEMICAL CORP
 P.O. BOX 2749
 W HELENA AR 72390

CEDAR CHEMICAL CORP
 HWY 242 S
 W HELENA AR 72390

West Helena Acct. Dept.

RECEIVED
 JAN 26 1998
 RECEIVED

1-18-98
 11130

PLEASE RETURN THE 'DUPLICATE INVOICE' COPY WITH
 REMITTANCE TO INSURE PROPER PAYMENT IS APPLIED TO YOUR
 ACCOUNT.

INVOICE

PURCHASE ORDER #: 04-087455
 FOB: NEW ORLEANS, LA

ORDER INVOICE NO: 3041770 DATE: 01-22-98
 FREIGHT: COLLECT DATE SHIPPED: 01-18-98

ITEM	CODES	DESCRIPTION	QUANTITY	UNIT PRICE	AMOUNT
01	N826	3,4-DICHLOROANILINE, PURE	42,990.00	1.84	79,101.60

080081 06Y63647
 BULK CONT: UTCU457009 GW: 50,000 TW: 7,010 NW: 42,990 (LBS)
 ASSAY: 100.00

SEND A CERTIFICATE OF DELIVERY OF IMPORTED MERCHANDISE TO THE
 ATTENTION OF MR BOB CHRISTIAN; CEDAR CHEMICAL CORP; PO BOX
 2749; WEST HELENA, AR 72390. SPECIAL PRICING APPLIES

ENTERED
 JAN 31 1998
 WEST HELENA

79,101.60

VENDOR #		INVOICE #	
2987		3041770	
P.O. #	REC. RPT. #	INV. CD	INV. DATE
87455		1	012298
TERMS CODE	DUE DATE	FRT BILL CD	SALES ORDER #
3			
INVOICE AMT.	DISC ALLOWED		
79,101.60			
GL NUMBER	AMOUNT	WORK ORDER #	
01535910	79,101.60		
DONE BY	DATE	APPROVED BY	ENTERED BY
KK			021

LAST PAGE
 ATION **0051
 IN YOUR PURCHASE ORDER, YOUR ORDER IS ACCEPTED
 IF NO SUCH CONTRACT EXISTS. YOUR ORDER IS ACCEPTED
 TERMS AND CONDITIONS PRINTED ON THE REVERSE SIDE

orporation, Pittsburgh, PA 15205-8741
 AB000007948

RAW MATERIAL RECEIVING RECORD

No 11130

CEDAR CHEMICAL 9000-1 REV: C

TIME IN AT GATE
1222

RECEIVED BY
[Signature]

SECTION 1

DATE: 1-12-00 ORDER NO: 04-C87455 UNIT ON TRUCK TO: UTC 4457CC9-6 Net Wt: 11# 42990

SHIPPER: *[Signature]* CARRIER: *[Signature]*

QUANTITY	CONTAINER	DESTINATION	RAW MAT CODE #	DESCRIPTION
1	S/C	unit 6	3020	DCA

COMMENTS
C. O. H. in FAB

SECTION 2

RECIPIENT: *[Signature]* TIME SAMPLE/CERTIFICATE TAKEN TO LAB: 12:40

UNLOADED AT (tank number, unit, warehouse, etc.): *T-16211*

COMMENTS

SECTION 3

LAB TECHNICIAN: PE ACCEPT: V REJECT: REASON FOR REJECTION:

COMMENTS
CLAPPA 700...

SECTION 4

PLANT SUPERVISOR: ACCEPT: REJECT: REASON FOR REJECTION:

PLANT WEIGHT: NET UNLOADING TIMES: START TIME: END TIME:

COMMENTS



REMIT TO:
BAYER CORPORATION
 P.O. BOX 75662
 CHARLOTTE, NC 28275-5662

FIBERS ORGANICS AND RUBBER DIV
 100 BAYER ROAD
 PITTSBURGH, PA. 15205

ORDER INVOICE
 BILL TO: 005761-001

NO:3041780

DATE: 01-23-98 CO-21 DIV-10 DP-0012
 SHIP TO: 005761-001

CEDAR CHEMICAL CORP
 P.O. BOX 2749
 W HELENA AR 72390

CEDAR CHEMICAL CORP
 HWY 242 S
 W HELENA AR 72390

1-24-98
 11165

West Helena Acct. Dept.

RECEIVED
 JAN 29 1998
RECEIVED

ENTERED

FEB 17 1998

INVOICE

PLEASE RETURN THE DUPLICATE INVOICE COPY WITH REMITTANCE TO INSURE PROPER CREDIT IS APPLIED TO YOUR ACCOUNT.

PURCHASE ORDER #:04-087455
 FOB:NEW ORLEANS, LA

ORDER INVOICE NO: 3041780 DATE: 01-23-98
 FREIGHT: COLLECT DATE SHIPPED: 01-23-98

ITEM	CODES	DESCRIPTION	QUANTITY	UNIT PRICE	AMOUNT
01	N826	3,4-DICHLOROANILINE, PURE	44,754.00	1.84	82,347.36

080081 06Y63652
 BULK CONT:UTCU457000 GW: 50,000 TW: 5,246 NW: 44,754 (LBS)
 ASSAY%100.00

SEND A CERTIFICATE OF DELIVERY OF IMPORTED MERCHANDISE TO THE ATTENTION OF MR BOB CHRISTIAN; CEDAR CHEMICAL CORP; PO BOX 2749; WEST HELENA, AR 72390. SPECIAL PRICING APPLIES

VENDOR #		INVOICE #	
2987		3041780	
P.O. #	REC. RPT. #	INV. CD	INV. DATE
87455		1	012398
TERMS CODE	DUE DATE	FRT BILL CO	SALES ORDER #
2			
INVOICE AMT.	DISC. ALLOWED		
82,347.36			
GL NUMBER	AMOUNT	WORK ORDER #	
C153 5910	82,347.36		
DONE BY	DATE	APPROVED BY	
RK	2-17-98		

82,347.36

LAST PAGE
 ATION **0038

ED IN YOUR PURCHASE ORDER. YOUR ORDER IS ACCEPTED NO SUCH CONTRACT EXISTS. YOUR ORDER IS ACCEPTED TERMS AND CONDITIONS PRINTED ON THE REVERSE SIDE

RAW MATERIAL RECEIVING RECORD

NO. 11165

CEDAR CHEMICAL 9000-1 REV: C

TIME IN AT GATE <i>07:30</i>	SECTION 1	RECEIVED BY <i>DL</i>
---------------------------------	-----------	--------------------------

DATE	ORDER NO.	CAR OR TRUCK NO.	DECLARED NET WT.
<i>1/24/98</i>	<i>04-027455</i>	<i>UTCU4570007-</i>	<i>Net 44 753</i>

SHIPPER <i>Boyer</i>	CARRIER <i>Tribe E</i>
-------------------------	---------------------------

QUANTITY	CONTAINER	DESTINATION	RAW MAT CODE #	DESCRIPTION
<i>1</i>	<i>S/C</i>	<i>unit 6</i>	<i>3020</i>	<i>DCA</i>

COMMENTS
C of A was checked

SECTION 2

RECIPIENT	TIME SAMPLE/CERTIFICATE TAKEN TO LAB
-----------	--------------------------------------

<i>M. W.</i>	<i>9:00</i>
--------------	-------------

UNLOADED AT (tank number, unit, warehouse, etc.)
unit 6 will be unloaded into T6210 & T6211

COMMENTS
no more to ship

SECTION 3

CAR TECHNICAL	LOSER	DEFECT	REASON FOR DEFECT
---------------	-------	--------	-------------------

<i>FD</i>	<i>✓</i>		
-----------	----------	--	--

COMMENTS

SECTION 4

PLANT WEIGHT	NET	UNLOADING TIMES
--------------	-----	-----------------

<i>Net</i>	<i>X</i>	
------------	----------	--

PLANT WEIGHT	START TIME	END TIME
NET		

COMMENTS
cont was dumped in unit



REMIT TO:

BAYER CORPORATION
P.O. BOX 75662
CHARLOTTE, NC 28275-5662

FIBERS ORGANICS AND RUBBER DIV
100 BAYER ROAD
PITTSBURGH, PA. 15205

ORDER INVOICE
BILL TO: 005761-001

NO: 3041778

DATE: 01-23-98 CO-21 DIV-10 DP-0012
SHIP TO: 005761-001

CEDAR CHEMICAL CORP
P.O. BOX 2749
W HELENA AR 72390

CEDAR CHEMICAL CORP
HWY 242 S
W HELENA AR 72390

West Helena Acct. Dept.

RECEIVED
JAN 29 1998
RECEIVED

INVOICE

PLEASE RETURN THE "DUPLICATE INVOICE" COPY WITH
REMITTANCE TO INSURE PROPER PAYMENT IS APPLIED TO YOUR
ACCOUNT

PURCHASE ORDER #: 04-087455
FOB: NEW ORLEANS, LA

ORDER INVOICE NO: 3041778 DATE: 01-23-98
FREIGHT: COLLECT DATE SHIPPED: 01-23-98

ITEM	CODES	DESCRIPTION	QUANTITY	UNIT PRICE	AMOUNT
01	N826	3,4-DICHLOROANILINE, PURE	42,417.00	1.84	78,047.28

080081 06Y63651
BULK CONT: SNIU121127 GW: 50,000 TW: 7,583 NW: 42,417 (1.84)
ASSAY%100.00

SEND A CERTIFICATE OF DELIVERY OF IMPORTED MERCHANDISE TO THE
ATTENTION OF MR BOB CHRISTIAN; CEDAR CHEMICAL CORP; PO BOX
2749; WEST HELENA, AR 72390. SPECIAL PRICING APPLIES

ENTERED
FEB 17 1998
WEST HELENA

78,047.28

VENDOR #		INVOICE #	
2987		3041778	
P.O. #	REC RPT. #	INV CD	INV. DATE
87455		1	012398
TERMS CODE	DUE DATE	FRT BL' CD	SALES ORDER #
3			
INVOICE AMT.	DISC ALLOWED		
78,047.28			
GL NUMBER	AMOUNT	WORK ORDER #	
C153 5910	78,047.28		
DONE BY	DATE	APPROVED BY	ENTERED BY

LAST PAGE
ATION **0037

IN YOUR PURCHASE ORDER, YOUR ORDER IS ACCEPTED
IF SUCH CONTRACT EXISTS. YOUR ORDER IS ACCEPTED
TERMS AND CONDITIONS PRINTED ON THE REVERSE SIDE

RAW MATERIAL RECEIVING RECORD

NO 11169

CEDAR CHEMICAL 9000-1 REV: C

TIME IN AT GATE
1450

RECEIVED BY
B. McR...

SECTION 1

DATE	ORDER NO	CAR OR TRUCK NO	DECLARED WEIGHT
1-24-98	04-087455	Sea Cont # SMIU-1811876	Net 42416

SHIPPER	CARRIER
Bayco	Triple E

QUANTITY	CONTAINER	DESTINATION	RAW MAT CODE #	DESCRIPTION
1	S/c	Unit #6	3020	DCA

COMMENTS
DCA is in Cedar. Lot. per T. Peppers

SECTION 2

RECIPIENT	TIME SAMPLE/CERTIFICATE TAKEN TO LAB
	1505

UNLOADED AT (tank number, unit, warehouse, etc.)

COMMENTS
To be unloaded later

SECTION 3

UNREASONABLE	REJECT	REJECT	REASON FOR REJECTION
TLP	X		

COMMENTS

SECTION 4

REJECT	REASON FOR REJECTION
✓	

PLANT WEIGHT	UNLOADING TIMES	
NET	START TIME	END TIME
	1:24:98	15:20

COMMENTS



BAYER

REMIT TO:

BAYER CORPORATION
P.O. BOX 75862
CHARLOTTE, NC 28276-5862

FIBERS ORGANICS AND RUBBER DIV
100 BAYER ROAD
PITTSBURGH, PA. 15205

ORDER INVOICE
BILL TO: 005761-001

NO:3041773

DATE: 01-22-98 CO-21 DIV-10 DP-0012
SHIP TO: 005761-001

CEDAR CHEMICAL CORP
P.O. BOX 2749
W HELENA AR 72390

CEDAR CHEMICAL CORP
RHW 242 S
W HELENA AR 72390

*1-18-98
11129*

*870-572-3795
Lisa Walker.*

PURCHASE ORDER #:04-087456
FOB:NEW ORLEANS, LA

ORDER INVOICE NO: 3041773 **DATE: 01-22-98**
FREIGHT: COLLECT **DATE SHIPPED: 01-14-98**

ITEM	CODES	DESCRIPTION	QUANTITY	UNIT PRICE	AMOUNT
01	N826	3,4-DICHLOROANILINE, PURE	43,078.00	1.84	79,263.52

080081 06Y63649
 BULK CONT:SNYU121279 GW: 50,000 TW: 6,922 NW: 43,078 (LBS)
 ASSAYZ100.00

SEND A CERTIFICATE OF DELIVERY OF IMPORTED MERCHANDISE TO THE
 ATTENTION OF MR BOB CHRISTIAN; CEDAR CHEMICAL CORP; PO BOX
 2749; WEST HELENA, AR 72390. SPECIAL PRICING APPLIES

ENTERED

FEB 26 1998

WEST HELENA

79,263.52

VENDOR #		INVOICE #	
2987		3041773	
P.O. #	REC RPT. #	INV. CD	INV. DATE
87455		1	012298
TERMS CODE	DUE DATE	FRT. BILL CD	SALES ORDER #
2			
INVOICE AMT.		DISC ALLOWED	
79,263.52			
GL NUMBER	AMOUNT	WORK ORDER #	
C153 5910	79,263.52		
DONE BY		DATE	APPROVED BY
RK		2-24-98	QW
		ENTERED BY	

ST PAGE
ON

**0052

PURCHASE ORDER, YOUR ORDER IS ACCEPTED SUBJECT TO
 IF ORDER IS ACCEPTED SUBJECT TO OUR REGULAR SCHED-
 ULE SERVICE.

RAW MATERIAL RECEIVING RECORD

N^o 11129

CEDAR CHEMICAL 9000-1 REV: C

TIME IN AT GATE
12

RECEIVED BY
J. Williams

SECTION 1

DATE	ORDER NO.	CAR OR TRUCK NO.	QUANTITIES (WEIGHT)
	0009455	414-1279-7	Net 42 413018

SHIPPER	CARRIER
<i>It use</i>	<i>Triplex</i>

QUANTITY	CONTAINER	DESTINATION	RAW MAT CODE #	DESCRIPTION
1	511	<i>unit 6</i>	3000	DCA

COMMENTS
C.O.A. in #B

SECTION 2

RECIPIENT	TIME SAMPLE CERTIFICATE SENT TO LAB
<i>J. Williams</i>	

UNLOADED AT (tank number, unit, warehouse, etc.) *15*

COMMENTS
15

SECTION 3

LAB TECHNICIAN	ACCEPT
<i>RF</i>	

COMMENTS
DCA

SECTION 4

UNIT SUPERVISOR	ACCEPT

PLANT WEIGHT	UNLOADING TIMES	
NET	START TIME	END TIME

COMMENTS



REMIT TO:
 BAYER CORPORATION
 P.O. BOX 75662
 CHARLOTTE, NC 28275-5662

West Helena Acct. Dept.

RECEIVED
 FEB 09 1998
 RECEIVED

FIBERS ORGANICS AND RUBBER DIV
 100 BAYER ROAD
 PITTSBURGH, PA. 15205

ORDER INVOICE
 BILL TO: 005761-001

DATE: 02-05-98 CO-21 DIV-10 DP-0012
 SHIP TO: 005761-001

CEDAR CHEMICAL CORP
 P.O. BOX 2749
 W HELENA AR 72390

CEDAR CHEMICAL CORP
 HWY 242 S
 W HELENA AR 72390

FEB 17 1998

WEST HELENA

INVOICE

PLEASE RETURN THE "DUPLICATE INVOICE" COPY WITH
 REMITTANCE TO INSURE PROPER PAYMENT IS APPLIED TO YOUR
 ACCOUNT

PURCHASE ORDER #: 04-087455
 FOB: NEW ORLEANS, LA

ORDER INVOICE NO: 3041784 DATE: 02-05-98
 FREIGHT: COLLECT DATE SHIPPED: 01-28-98

ITEM	CODES	DESCRIPTION	QUANTITY	UNIT PRICE	AMOUNT
01	N826	3,4-DICHLOROANILINE, PURE	41,888.00	1.84	77,073.92

080081 06Y63654
 BULK CONT: SNIU121092 GW: 50,000 TW: 8,112 NW: 41,888 (LBS)
 ASSAY: 100.00

SEND A CERTIFICATE OF DELIVERY OF IMPORTED MERCHANDISE TO THE
 ATTENTION OF MR BOB CHRISTIAN; CEDAR CHEMICAL CORP; PO BOX
 2749; WEST HELENA, AR 72390. SPECIAL PRICING APPLIES

VENDOR #		INVOICE #	
2987		3041784	
P.O. #	REC. RPT. #	INV CD	INV. DATE
87455		1	020598
TERMS CODE	DUE DATE	FRT BILL CD	SALES ORDER #
3			
INVOICE AMT.	DISC. ALLOWED		
77,073.92			
GL NUMBER	AMOUNT	WORK ORDER #	
0153 5910	77,073.92		
DATE	APPROVED BY	ENTERED BY	
		946	

77,073.92

LAST PAGE
 TION

**0051

IF IN YOUR PURCHASE ORDER, YOUR ORDER IS ACCEPTED
 TO SUCH CONTRACT EXISTS, YOUR ORDER IS ACCEPTED
 TERMS AND CONDITIONS PRINTED ON THE REVERSE SIDE

AB0000079480

RAW MATERIAL RECEIVING RECORD

№ 11188

CEDAR CHEMICAL 9000-1 REV: C

TIME IN AT GATE
0348

RECEIVED BY
[Signature]

SECTION 1

DATE: 1-1-11
CARRIER: 24-097455
SHIPPER: 11111-1-1-1
Net 15 of 41,887

SHIPPER: *B...* CARRIER: *T...*

QUANTITY	CONTAINER	DESTINATION	RAW MAT CODE #	DESCRIPTION
1				

COMMENTS
1200.A. in TAR

SECTION 2

UNLOADED AT (tank number, etc. warehouse, etc.)

COMMENTS

SECTION 3

COMMENTS
JH

PLANT WEIGHT
NET
START TIME

COMMENTS



REMIT TO:
 BAYER CORPORATION
 P.O. BOX 75862
 CHARLOTTE, NC 28275-5862

RECEIVED
 FEB 09 1998
 RECEIVED

FIBERS ORGANICS AND RUBBER DIV
 100 BAYER ROAD
 PITTSBURGH, PA. 15205

ORDER INVOICE
 BILL TO: 005761-001

NO: 3041783

DATE: 02-05-98 CO-21 DIV-10 DP-0012
 SHIP TO: 005761-001

CEDAR CHEMICAL CORP
 P.O. BOX 2749
 W HELENA AR 72390

CEDAR CHEMICAL CORP
 HWY 242 S
 W HELENA AR 72390

INVOICE

PLEASE RETURN THE "DUPLICATE INVOICE" COPY WITH
 REMITTANCE TO INSURE PROPER PAYMENT IS APPLIED TO YOUR
 ACCOUNT

PURCHASE ORDER #: 04-087455
 FOB: NEW ORLEANS, LA

ORDER INVOICE NO: 3041783 DATE: 02-05-98
 FREIGHT: COLLECT DATE SHIPPED: 01-28-98

ITEM	CODES	DESCRIPTION	QUANTITY	UNIT PRICE	AMOUNT
01	N826	3,4-DICHLOROANILINE, PURE	41,447.00	1.84	76,262.48

080081 06Y63653
 BULK CONT: SNIU121015 GW: 50,000 TW: 8,553 NW: 41,447 (LBS)
 ASSAY%100.00

ENTERED
 FEB 17 1998

SEND A CERTIFICATE OF DELIVERY OF IMPORTED MERCHANDISE TO THE
 ATTENTION OF MR BOB CHRISTIAN; CEDAR CHEMICAL CORP; PO BOX
 2749; WEST HELENA, AR 72390. SPECIAL PRICING APPLIES

WEST HELENA

VENDOR #		INVOICE #	
2987		3041783	
P.O. #	REC. RPT. #	INV. CD	INV. DATE
87455		1	020598
TERMS CODE	DUE DATE	FRT. BILL CD	SALES ORDER #
3			
INVOICE AMT	DISC. ALLOWED		
76,262.48			
GL NUMBER	AMOUNT	WORK ORDER #	
C153 SA10	76,262.48		
DONE BY	DATE	APPROVED BY	ENTERED BY

76,262.48

LAST PAGE
 TION

**0050

IN YOUR PURCHASE ORDER, YOUR ORDER IS ACCEPTED
 NO SUCH CONTRACT EXISTS. YOUR ORDER IS ACCEPTED
 TERMS AND CONDITIONS PRINTED ON THE REVERSE SIDE

RAW MATERIAL RECEIVING RECORD

N: 11191

CEDAR CHEMICAL 9000-1 REV: C

TIME IN AT GATE 0800	SECTION 1	RECEIVED BY <i>M. Sullivan</i>
-------------------------	-----------	-----------------------------------

DATE 1-29-98	ORDER NO. C 4087455	CAR OR TRUCK NO. SN10121715-6	DECLARED WEIGHT Net 7/2
-----------------	------------------------	----------------------------------	----------------------------

SHIPPER Bayer	CARRIER H. H. E.
------------------	---------------------

QUANTITY	CONTAINER	DESTINATION	RAW MAT CODE #	DESCRIPTION
1	SK	unit #6	3020	DCA

COMMENTS
Lab Has C.O.A.

SECTION 2

RECIPIENT <i>M. Sullivan</i>	TIME SAVED / CERTIFICATE TAKEN TO LAB 9:55
---------------------------------	---

UNLOADED AT (tank number, warehouse, etc.)
unit #6

COMMENTS
unit, was to be disposed & unloaded at the plant site

SECTION 3

TLP	X		
-----	---	--	--

COMMENTS

SECTION 4

PLANT WEIGHT	UNLOADING TIMES	
NET	START TIME	END TIME

COMMENTS



ILSCOT - GUIDROZ INTERNATIONAL

FMO NO 4054

MEMBER OF NATIONAL BROKERS & FORWARDERS
ASSOCIATION OF AMERICA

2815 DIVISION STREET
SUITE 202
METAIRIE, LA 70002 USA
PHONE (504) 887-8897
FAX (504) 887-8898

TO CEDAR CHEMICAL CORP.
HIGHWAY 242 SOUTH

INVOICE # 41005

WEST HELENA, AR 72390

ATTN: ACTS RECEIVABLE

OUR REFERENCE	DATE	YOUR REFERENCE
41005	01/24/98	BAYER TANKS FROM GERMANY

CARRIER	ON BOARD DATE	PORT OF LOADING	PORT OF DISCHARGE	ETA
	/ /	ROTTERDAM	NOLA	/ /

BILL OF LADING NO.	COMMODITY
	PICK UP NOLA /TRUCK TO W.HELENA

RETURN TO NOLA EMPTY AND DISCHARGE TANK TO LEASING COMPANY

ENCLOSURES	ORIG.	COPY	DESCRIPTION OF CHARGES	AMOUNT
BILLS OF LADING			AIR/OCEAN FREIGHT	227.50
INS. CERTIFICATE			INLAND FREIGHT	930.00
CONSULAR INVOICE			DRAYAGE/PORT SERVICES	315.00
			INSURANCE	930.00
			CONSULAR FEES	245.00
			DOCUMENTS	930.00

ENTERED
JAN 30 1998

WEST HELENA

VENDOR #	INVOICE #		
12347	41005		
P.O. #	REC. RPT. #	INV. CD	INV. DATE
		1	012498
TERMS CODE	DUE DATE	FRT BILL CD	SALES ORDER #
ON			
INVOICE AMT.	DISC. ALLOWED		
5142.50			
GL NUMBER	AMOUNT	WORK ORDER #	
C 153 5920	5142 50		
DONE BY	DATE	APPROVED BY	ENTERED BY
KK	1-28-98	JW	

227.50
930.00
315.00
930.00
245.00
930.00
385.00
930.00
210.00
40.00

\$ 5142.50

YOU.

Master Paper Products

RELATIVE TO THESE CHARGES. THIS COMPANY HAS A POLICY AGAINST PAYMENT SOLICITATION, OR RECEIPT OF ANY REBATE DIRECTLY, OR INDIRECTLY, WHICH WOULD BE UNLAWFULL UNDER THE UNITED STATES SHIPPING ACT OF 1984.

AB0000079480



ILSCOT - GUIDROZ INTERNATIONAL

REC NO 4054

MEMBER OF NATIONAL BROKERS & FORWARDERS
ASSOCIATION OF AMERICA

2815 DIVISION STREET
SUITE 202
METAIRIE, LA 70002 USA
PHONE (504) 887-8897
FAX (504) 887-8898

TO: CEDAR CHEMICAL CORP.
HIGHWAY 242 SOUTH

WEST HELENA, AR 72390

ATTN: ACTS RECEIVABLE

INVOICE # 53080

OUR REFERENCE	DATE	YOUR REFERENCE		
53080	12/31/97	BAYER LEVERKUSEN TO SAJABABONY HUNGARY		
CARRIER	ON BOARD DATE	PORT OF LOADING	PORT OF DISCHARGE	ETA
	/ /			12/02/97
BILL OF LADING NO.		COMMODITY:		
		3,4DCA 4 TRUCKS LOADS 66 DRUMS EACH		

39600 LBS. APPROX EACH TO ARRIVE 12-2 18R WEEK DECEMBER 1997

ENCLOSURES	ORIG.	COPY	DESCRIPTION OF CHARGES	AMOUNT
BILLS OF LADING			AIR/OCEAN FREIGHT	
INS. CERTIFICATE			INLAND FREIGHT	
CONSULAR INVOICE			DRAYAGE/PORT SERVICES	
COMMERCIAL INVOICE			INSURANCE	
			CONSULAR FEES	
			DOCUMENT EXPRESS	
			OTHER	

ENTERED
 JAN 14 1998
 WEST HELENA

VENDOR #		INVOICE #	
12347		53080	
P.O. #	REG. RPT. #	INV. CD	INV. DATE
		1	12/31/97
TERMS CODE	DUE DATE	FRT. BILL CD	SALES ORDER #
N			
INVOICE AMT.	DISC. ALLOWED		
7119.50			
GL NUMBER	AMOUNT	WORK ORDER #	
C153 5920	7119.50		
DONE BY	DATE	APPROVED BY	ENTERED BY
RR	1-13-98	[Signature]	[Signature]

6825.00
225.00
14.50
25.00
30.00

DCA TO
HUNGARY
OK
BC

\$ 7119.50
GIVE YOU.

SEND AND A TRUE COPY OF EACH PERTINENT DOCUMENT
IPT OF ANY REBATE DIRECTLY OR INDIRECTLY.



ILSCOT - GUIDROZ INTERNATIONAL

FMC NO 4034

MEMBER OF NATIONAL BROKERS & FORWARDERS
ASSOCIATION OF AMERICA

2815 DIVISION STREET
SUITE 202
METAIRIE, LA 70002 USA
PHONE (504) 887-8897
FAX (504) 887-8898

TO: CEDAR CHEMICAL CORP.
HIGHWAY 242 SOUTH

WEST HELENA, AR 72390

ATTN: ACTS RECEIVABLE

INVOICE # 41004

OUR REFERENCE	DATE	YOUR REFERENCE		
41004	01/07/98	BAYER TANKS FROM GERMANY		
CARRIER	ON BOARD DATE	PORT OF LOADING	PORT OF DISCHARGE	ETA
	/ /	ROTTERDAM	NOLA	/ /
BILL OF LADING NO.		COMMODITY:		
		PICK UP NOLA /TRUCK W.HELENA		

RETURN TO NOLA EMPTY AND DISCHARGE TANK TO LEASING CO.

ENCLOSURES	ORIG.	COPY	DESCRIPTION OF CHARGES	AMOUNT
BILLS OF LADING			AIR/OCEAN FREIGHT	
INS. CERTIFICATE			INLAND FREIGHT	
			DRAYAGE/PORT SERVICES	
			INSURANCE	
CONSULAR INVOICE			CONSULAR FEES	

ENTERED

JAN 14 1998

VAL 24.50

25.00

930.00

420.00

930.00

245.00

930.00

840.00

930.00

315.00

\$ 5579.50

VENDOR #		INVOICE #	
12347		41004	
P.O. #	REC. RPT. #	INV. CD	INV. DATE
		1	010798
TERMS CODE	DUE DATE	FRT. BILL CD	SALES ORDER #
N			
INVOICE AMT.		DISC. ALLOWED	
5579.50			
GL NUMBER	AMOUNT	WORK ORDER #	
0158 5920	5579.50		
DATE	APPROVED BY	ENTERED BY	
1-13-98	JW		

215

DCA
UNIT 6
OK
AC

PLEASE YOU.

Master Paper Products

UPON REQUEST, WE SHALL FURNISH A TRUE COPY OF EACH PERTINENT DOCUMENT RELATING TO THESE CHARGES. THIS COMPANY HAS A POLICY AGAINST PAYMENT SOLICITATION, OR RECEIPT OF ANY REBATE DIRECTLY, OR INDIRECTLY, WHICH WOULD BE UNLAWFUL UNDER THE UNITED STATES SHIPPING ACT OF 1984.

AB000007948

GILSCOT - GUIDROZ INTERNATIONAL

FMC NO 4054

MEMBER OF NATIONAL BROKERS & FORWARDERS
ASSOCIATION OF AMERICA

2815 DIVISION STREET
SUITE 202
METAIRIE, LA 70002 USA
PHONE (504) 887-8897
FAX (504) 887-8898

TO: CEDAR CHEMICAL CORP.
HIGHWAY 242 SOUTH

WEST HELENA, AR 72390

ATTN: ACTS RECEIVABLE

INVOICE # 41003

OUR REFERENCE	DATE	YOUR REFERENCE
41003	12/09/97	BAYER TANKS
CARRIER	ON BOARD DATE	PORT OF LOADING
	/ /	ROTTERDAM
		PORT OF DISCHARGE
		NOLA
BILL OF LADING NO.		COMMODITY:
		PICK UP NLA / WEST HELENA

RETURN TO NOLA EMPTY

ENCLOSURES	ORIG.	COPY	DESCRIPTION OF CHARGES
BILLS OF LADING			AIR/OCEAN FREIGHT
INS. CERTIFICATE			INLAND FREIGHT
CONSULAR INVOICE			DRAYAGE/PORT SERVICES
COMMERCIAL INVOICE			INSURANCE
			CONSULAR FEES
			DOCUMENT EXPRESS
			OTHER
			GILSCOT CHGS.

ENTERED
 JAN 14 1998
 14.00
 25.00 WEST HELENA

VENDOR #		INVOICE #	
12347		41003	
P.O. #	REC. RPT. #	INV. CD	INV. DATE
		1	120997
TERMS CODE	DUE DATE	FRT. BILL CD	SALES ORDER #
N			
INVOICE AMT.	DISC. ALLOWED		
6509.00			
GL NUMBER	AMOUNT	WORK ORDER #	
01535920	6509.00		
		a/s	
DONE BY	DATE	APPROVED BY	ENTERED BY
RK	1-13-98	<i>[Signature]</i>	

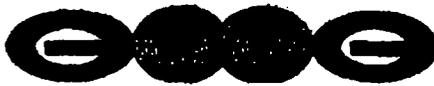
930.00
420.00
930.00
560.00
930.00
315.00
930.00
315.00
930.00
210.00

\$ 6509.00

VE YOU.

SEND AND A TRUE COPY OF EACH PERTINENT DOCUMENT
OF ANY REBATE DIRECTLY OR INDIRECTLY.

DCA
 UN
 6
 OK
 BC



ILSCOT - GUIDROZ INTERNATIONAL

FMC NO 4054

MEMBER OF NATIONAL BROKERS & FORWARDERS
ASSOCIATION OF AMERICA

2815 DIVISION STREET
SUITE 202
METAIRIE, LA 70002 USA
PHONE (504) 887-8897
FAX (504) 887-8898

TO: CEDAR CHEMICAL CORP.
HIGHWAY 242 SOUTH

WEST HELENA, AR 72390

ATTN: ACTS RECEIVABLE

INVOICE # 41002

OUR REFERENCE	DATE	YOUR REFERENCE			
41002	12/05/97	BAYER TANKS NOLA TO WEST HELENA			
CARRIER	ON BOARD DATE	PORT OF LOADING	PORT OF DISCHARGE	ETA	
SL QUALITY	/ /	ROTTERDAM	NOLA	11/03/97	
BILL OF LADING NO.	COMMODITY: BAYER TANKS FROM NOLA TO W.HELENA/				

RETURN TRIP EMPTY

ENCLOSURES	ORIG.	COPY	DESCRIPTION OF CHARGES	AMOUNT
BILLS OF LADING			AIR/OCEAN FREIGHT	
INS. CERTIFICATE			INLAND FREIGHT	
CONSULAR INVOICE			DRAYAGE/PORT SERVICES	
COMMERCIAL INVOICE			INSURANCE	
BANK INSTRUCTION			CONSULAR FEES	
			DOCUMENT EXPRESS	
			OTHER	

ENTERED
14.50
25.00
JAN 14 1998

VENDOR #		INVOICE #	
12347		41002	
P.O. #	REC. RPT. #	INV. CD	INV. DATE
		1	120597
TERMS CODE	DUE DATE	FRT. BILL CD	SALES ORDER #
B			
INVOICE AMT.	DISC. ALLOWED		
4599.50			
GL NUMBER	AMOUNT	WORK ORDER #	
01535920	4599.50		
DONE BY		DATE	APPROVED BY
RK		1-13-98	[Signature]
		ENTERED BY	

930.00
175.00
930.00
175.00
930.00
245.00
930.00
245.00

DCA UNIT 6
OK BC

\$ 4599.50

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GILSCOT - GUIDROZ INTERNATIONAL

FMC NO 4154

MEMBER OF NATIONAL SHIPPERS & FORWARDERS ASSOCIATION OF AMERICA

2517 DIVISION STREET
SUITE 202
METairie, LA 70002 USA
PHONE (504) 887-8887
FAX (504) 887-8888

TO CEDAR CHEMICAL CORP.
HIGHWAY 242 SOUTH
WEST HELENA, AR 72390
ATTN: ACTS RECEIVABLE

INVOICE # 41001

OUR REFERENCE	DATE	YOUR REFERENCE
41001	11/08/97	BAYER CORP PITTSBURG PA.
CARRIER	ON BOARD DATE	PORT OF LOADING
	/ /	ROTTERDAM
"BL QUALITY"		PORT OF DISCHARGE
		NOLA
BILL OF LADING NO.		EIA
		11/03/97
COMMODITY: 2 ISOTANKS UPTO WEST HELENA		
TO ISOTANKS BACK TO NOLA FROM WEST HELENA		

ENCLOSURES	QTY	COPY	DESCRIPTION OF CHARGES	AMOUNT
BILLS OF LADING			AIR/OCEAN FREIGHT	
MIS. CERTIFICATE			INLAND FREIGHT	
CONSULAR INVOICE			DRAYAGE/PORT SERVICES	
COMMERCIAL INVOICE			INSURANCE	
BANK INSTRUCTION			CONSULAR FEES	
			DOCUMENT EXPRESS	
			OTHER	
			GILSCOT	

ENTERED
25.00 JAN 14 1998

VENDOR #		INVOICE #	
12347		41001	
P.O. #	REC. RPT. #	INV. CD	INV. DATE #
		1	110897
TERMS CODE	DUE DATE	FRY. BILL CD	SALES ORDER #
N			
INVOICE AMT.		DISC. ALLOWED	
416500			
GL NUMBER	AMOUNT	WORK ORDER #	
01535920	416500		
DONE BY	DATE	APPROVED BY	ENTERED BY
RR	1-13-98	[Signature]	

1035.00
1035.00
1035.00
1035.00

C153-5920

Unit 6
OK
/30

4165.00

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MEMBER OF NATIONAL BROKERS & FORWARDERS
ASSOCIATION OF AMERICA

2815 DIVISION STREET
SUITE 202
METAIRIE, LA 70002 USA
PHONE (504) 887-8897
FAX (504) 887-8898

TO: CEDAR CHEMICAL CORP.
HIGHWAY 242 SOUTH

WEST HELENA, AR 72390

ATTN: ACTS RECEIVABLE

INVOICE # 53293

OUR REFERENCE	DATE	YOUR REFERENCE	
53293	01/28/98	43585	AGRO SAN KIMYA SANAYI VE TIC AS

CARRIER	ONBOARD DATE	PORT OF LOADING	PORT OF DISCHARGE	ETA
*CONSHIP AMERICA*V C17E	01/21/98	NEW ORLEANS, LA/U.S.A	ISTANBUL/TURKEY	02/15/98

BILL OF LADING NO.	COMMODITY.
TEMUNTAMR17E0223	1X20 FT CONTAINER TMMU2212931

72X55 GAL DRUMS 3,4DICHLORANALINE 42624#

ENCLOSURES	ORIG.	COPY	DESCRIPTION OF CHARGES	AMOUNT
BILLS OF LADING		3	AIR/OCEAN FREIGHT	2098.32
			INLAND FREIGHT	735.00
INS. CERTIFICATE		1	DRAYAGE/PORT SERVICES	5.00
CONSULAR INVOICE			INSURANCE	
COMMERCIAL INVOICE		1	CONSULAR FEES	46.00
BANK INSTRUCTION		1	DOCUMENT EXPRESS	
TRANSMITTAL LETTERS		1	OTHER	
			PREP. CONSULAR DOCUMENTS	80.00

46.00
JAN 31 1998
WEST HELENA

VENDOR #		INVOICE #	
12347		53293	
PO. #	REC RPT #	INV CD	INV DATE
		1	012898
TERMS CODE	DUE DATE	FRT. BILL CD	SALES ORDER #
N			
INVOICE AMT.	DISC ALLOWED		
3030.32			
GL NUMBER	AMOUNT	WORK ORDER #	
C1535980	3030.32		
		030	

80.00
25.00
26.00
7.50
7.50

\$ 3030.32

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MEMBER OF NATIONAL BROKERS & FORWARDERS
ASSOCIATION OF AMERICA

2815 DIVISION STREET
SUITE 202
METAIRIE, LA 70002 USA
PHONE (504) 887-8897
FAX (504) 887-8898

TO: CEDAR CHEMICAL CORP.
HIGHWAY 242 SOUTH

WEST HELENA, AR 72390

ATTN: ACTS RECEIVABLE

INVOICE # 41008

OUR REFERENCE	DATE	YOUR REFERENCE		
41008	03/13/98	BAYER TANKS		
CARRIER	ON BOARD DATE	PORT OF LOADING	PORT OF DISCHARGE	ETA
	/ /	ROTTERDAM	NOLA	/ /
BILL OF LADING NO.:		COMMODITY:		
		BOB TAIL EMPTY UP TO WEST HELENA ,		

RETURN TWO EMPTY TANKS TO NOLA.

ENCLOSURES	ORIG.	COPY	DESCRIPTION OF CHARGES	AMOUNT
BILLS OF LADING			AIR/OCEAN FREIGHT	<p style="text-align: center;">ENTERED</p> <p style="text-align: center;">MAR 26 1998</p> <p style="text-align: center;">14.50</p> <p style="text-align: center;">WEST HELENA</p>
INS. CERTIFICATE			INLAND FREIGHT	
CONSULAR INVOICE			DRAYAGE/PORT SERVICES	
COMMERCIAL INVOICE			INSURANCE	
BANK INSTRUCTION			CONSULAR FEES	
			DOCUMENT EXPRESS	
			OTHER	

VENDOR #		INVOICE #	
12347		41008	
P.O. #	REC. RPT. #	INV. CD	INV. DATE
		1	031398
TERMS CODE	DUE DATE	FRT. BILL CD	SALES ORDER #
N			
INVOICE AMT		DISC ALLOWED	
2389.50			
GL NUMBER	AMOUNT	WORK ORDER #	
C. 153 5920	2389.50		
DONE BY	DATE	APPROVED BY	ENTERED BY
RK	3-25-98	A	

930.00
245.00

930.00
245.00

25.00

\$ 2389.50

IVE YOU.

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AB0000079480



Transamerica
Leasing Inc.
100 Manhattanville Road
Purchase, NY 10577-2135
Telephone 914 251-9000
Fax 914 697-2886

PAGE: 1
AREA: AM REGION: 05

INVOICE DATE: FEBRUARY 28, 1998
INVOICE NUMBER: 9802102945

CEDAR CHEMICAL CORPORATION West Helena Acct. Dept.
P.O. BOX 2749
W. HELENA, AR 72390

RECEIVED
MAR 09 1998
RECEIVED

WIRE FUNDS TO : TRANSAMERICA LEASING INC
C/O CITIBANK NA NY NY
ACCT# 40523885/ ABA# 0210-00089
SEND CHECKS TO TRANSAMERICA LEASING INC
P.O. BOX 2377
CAROL STREAM, IL 60132-2377

CONTRACT: T11581
CUSTOMER: CCHXX

PLEASE INCLUDE INVOICE NUMBER AND
CONTRACT CODE WITH YOUR REMITTANCE

UNIT NUMBER	BOOKING/ REDELIVERY #	AC	ACTIVITY LOCATION	ACTIVITY DATE	BILLING FROM	PERIOD TO	BILL DAYS	DAILY RATE	CHARGE	CHARGE DESC.
SPECIAL TANK										
ICSU 0292501	MS1155C	OH	CONVERSI	06/01/96	02/01/98	02/28/98	28	13.00	364.00	RENTAL
ICSU 0292522	MS1155C	OH	CONVERSI	06/01/96	02/01/98	02/28/98	28	13.00	364.00	RENTAL
ICSU 0292543	MS1155C	OH	CONVERSI	06/01/96	02/01/98	02/28/98	28	13.00	364.00	RENTAL
ICSU 0292559	MS1188C	OH	CONVERSI	06/01/96	02/01/98	02/28/98	28	13.00	364.00	RENTAL
ICSU 0292564	MS1155C	OH	CONVERSI	06/01/96	02/01/98	02/28/98	28	13.00	364.00	RENTAL
ICSU 0292570	MS1188C	OH	CONVERSI	06/01/96	02/01/98	02/28/98	28	13.00	364.00	RENTAL
ICSU 0292610	FR30815	OH	LE HAVRE	09/16/97	02/01/98	02/28/98	28	13.00	364.00	RENTAL
ICSU 0292625	MS1155C	OH	CONVERSI	06/01/96	02/01/98	02/28/98	28	13.00	364.00	RENTAL
ICSU 0292646	MS1155C	OH	CONVERSI	06/01/96	02/01/98	02/28/98	28	13.00	364.00	RENTAL
ICSU 0292667	MS1155C	OH	CONVERSI	06/01/96	02/01/98	02/28/98	28	13.00	364.00	RENTAL
SUB TOTAL FOR SPECIAL TANK									3640.00	
HAZ-TANK										
TRLU 0270087	FR30228	OH	LE HAVRE	07/19/96	02/01/98	02/28/98	28	13.00	364.00	RENTAL
TRLU 0270106	FR30228	OH	LE HAVRE	07/19/96	02/01/98	02/28/98	28	13.00	364.00	RENTAL
TRLU 0271020	BE30275	OH	ANTWERP	10/28/96	02/01/98	02/28/98	28	13.00	364.00	RENTAL
TRLU 0271139	BE30275	OH	ANTWERP	10/28/96	02/01/98	02/28/98	28	13.00	364.00	RENTAL
TRLU 0272990	NL30239	OH	ROTTERDA	07/30/96	02/01/98	02/28/98	28	13.00	364.00	RENTAL
TRLU 0273002	NL30239	OH	ROTTERDA	07/30/96	02/01/98	02/28/98	28	13.00	364.00	RENTAL
TPTU 8100077	FR30785	OH	LE HAVRE	08/20/97	02/01/98	02/28/98	28	13.00	364.00	RENTAL
TPTU 8100143	MS1154C	OH	CONVERSI	06/01/96	02/01/98	02/28/98	28	13.00	364.00	RENTAL
TPTU 8100307	FR30287	OH	LE HAVRE	11/19/96	02/01/98	02/28/98	28	13.00	364.00	RENTAL
TPTU 8100333	FR30287	OH	LE HAVRE	11/19/96	02/01/98	02/28/98	28	13.00	364.00	RENTAL
TPTU 8100349	FR30704	OH	LE HAVRE	06/19/97	02/01/98	02/28/98	28	13.00	364.00	RENTAL
TPTU 8100502	MS1154C	OH	CONVERSI	06/01/96	02/01/98	02/28/98	28	13.00	364.00	RENTAL
TPTU 8100523	MS1154C	OH	CONVERSI	06/01/96	02/01/98	02/28/98	28	13.00	364.00	RENTAL

5096.00
8736.00
8736.00

VENDOR #		INVOICE #	
29355		982102945	
P.O. #	REC RPT. #	INV. CD	INV. DATE
		1	022898
TERMS CODE	DUE DATE	FRT. BILL CD	SALES ORDER #
N			
INVOICE AMT.		DISC ALLOWED	
8736.00			
GL NUMBER	AMOUNT	WORK ORDER #	
S 2 1440	7644.00		
C 153 5910	1092.00		
DONE BY		APPROVED BY	
RK		A	
DATE		ENTERED BY	
3-25-98			

ENTERED
MAR 26 1998

US \$8,736.00
INQUIRIES: 706-449-7889

OK
BC
AB000079480

K D Feddersen & Co

Load 10 716826

	Date	Inv #	Kgs	Conv	Lbs	US\$	Per # Price
Feddersen Shipments	1/5/98	215201	24,240	2.2046	53,440	140,592.00	2.631
				2.2046	0		
Inland Freight	1/5/98	47004 Feddersen				1,690.00	0.032
Inland Freight	11/8/97	52901 Gilscot				1,905.96	0.036
Inland Freight	11/8/97	52826 Gilscot				1,434.15	0.027
Ocean Freight							0.000
Inland Freight							0.000
Duty							0.000
Duty							0.000
Inland Freight							0.000
Accrued Frt & Duty							0.000

Cedar DCA Used Balance of Inventory 0.00 #DIV/0!
 1/31/98 (24,240 kg*2.2046/1.28) = 41,750

Ck Total 41,750

Actual Conversion Rate #DIV/0!
Target 1.280

Total Cost delivered to Drexal 145,622.11 2.725

Note: The Duty may be refunded if and when Congress passes budget bill.

Invoicing to Drexal

	Date	Inv #	Order #	lbs	US\$	Per # Price
Customer Invoice						#DIV/0!
Total Sold				0	0.00	#DIV/0!
Total Profit (Loss) from Transaction					(145,622.11)	#DIV/0!
Accounting:			\$ Dollars	Unit Cst		
C157-5910			140,592.00			
C157-5920			5,030.11			
Total		53,440	145,622.11	2.725		

DCA Shipped to Feddersen:

Date	B/L #	Container #	Drums Net Per Drum		Net Wt	
12/2/97	Bayer	Inv #3088975	66	551	36,366	
12/2/97	Bayer	Inv #3088966	66	551	36,366	
12/2/97	Bayer	Inv #3088954	66	551	36,366	
12/2/97	Bayer	Inv #3088959	66	551	36,366	145,464
			264	550	145,464	145,464

DCA Used Load 10 **41,750**

Balance of DCA Inventory at Hungary **103,714**

Diuron Received:	Bags	Diuron Shp'd	DCA Used
TRLU201089-5	404	26,720	20,875
TRLU215252-4	404	26,720	20,875
Total Received		53,440	41,750

K. D. FEDDERSEN & CO. UEBERSEEGESELLSCHAFT



K. D. Feddersen & Co. Ueberseege. · P.O.B. 10 10 20 · D-20007 Hamburg

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P.O.B. 10 10 20
D-20007 Hamburg
Telefon 040/2 35 07-01
Telefax 040/2 35 07-490
Telex *2 163 481 kdf d
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Gottent 11 A
D-20007 Hamburg

Cedar Chemical Corp.
24th Floor, 5100 Poplar Ave

38137 Memphis/TN.
U.S.A.

C1575910
ENTERED

FEB 27 1998

WEST HELENA

INVOICE 215201

Suppliers Code : 414371
Contract-No : 716876
Date of invoice: 05.01.98
Client No : 23024
Your Reference : -
Our Reference : KBA-GSC
Telephone : 040/23507-540
Page : 1

SHIPPED ON JANUARY 3, 1998 ON MS "TAYSON LYRES"
Terms of Delivery : C & F NEW ORLEANS, INCL. PACKING
Packing : 30 KGS MULTIPLY PAPER/PE BAGS + 1P OVERRAGE
Payment : 30 DAYS DATE OF B/L

Quantity P/U	Product Description	USD /P/U	Total /USD
24.240,00 kg	DIURON TECHNICAL	5,92 /kg	140.592,00

VENDOR #		INVOICE #	
10638		215201	
P.O. #	REC. RPT. #	INV. CO	INV. DATE
		1	010598
TERMS CODE	DUE DATE	FRY. BILL CO	SALES ORDER #
3			
INVOICE AMT.		DISC. ALLOWED	
140.592,00			
GL NUMBER	AMOUNT	WORK ORDER #	
C1575910	140.592,00		
DONE BY		APPROVED BY	ENTERED BY
[Signature]		[Signature]	[Signature]

:USD 140.592,00

952

**K. D. FEDDERSEN & CO.
UEBERSEEGESELLSCHAFT**



K. D. Feddersen & Co. Ueberseege. · P.O.B. 10 10 20 · D-20007 Hamburg

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D-20007 Hamburg
Telefon 040/2 35 07-01
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Telex *2 163 481 kdfu d
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Cottenstr. 11 A
D-20097 Hamburg

Cedar Chemical Corp.
24th. Floor, 5100 Poplar Ave

38137 Memphis/TN.
U.S.A.

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FROM mpha*

INVOICE 215201

Suppliers Code : 414371
Contract-No : 716826
Date of invoice: 08.01.98
Client No : 23024
Your Reference : -
Our Reference : KBA-GSC
Telephone : 040/23507-540
Page : 1

SHIPPED ON JANUARY 3, 1998 ON MS "TAYSON LYKES"
Terms of Delivery : C & F NEW ORLEANS, INCL. PACKING
Packing : 30 KGS MULTIPLY PAPER/PE BAGS + PP OVERRAGE
Payment : 30 DAYS DATE OF B/L

Quantity P/U	Product Description	USD /P/U	Total /USD
24.240,00 kg	DIURON TECHNICAL MIN. 96 %	5,80 /kg	140.592,00
C & F NEW ORLRANS, INCL. PACKING		Total	:USD 140.592,00

K.D.FEDDERSEN & CO.
UEBERSEEGERES. MBH

*A.
Lhola*

K. D. FEDDERSEN & CO. UEBERSEEGESELLSCHAFT



K. D. Feddersen & Co. Ueberseege. - P.O.B. 10 10 20 - D-20007 Hamburg

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P.O.B. 10 10 20
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Telex *2 163 481 kdf d
Büro/Office
Gottenslo 11 A
D-20097 Hamburg

Cedar Chemical Corp.
24th Floor, 5100 Poplar Ave

38137 Memphis/TN.
U.S.A.

C157-5920

Debit-Note

Number : 47004
Date : 05.01.98 / GBC
Client No : 23024
Contract-No : 716826
Page : 1

Contract-No : 716826-1
Invoice No : 215201

ENTERED

FEB 27 1998

FREIGHT CONTRIBUTION TO SHIPMENT ON
JANUARY 4, 1998 ON MS "TAYSON LYKES"
FROM HAMBURG TO NEW ORLEANS

USD

WEST DELFINA 1.690,00

:USD 1.690,00

:USD 1.690,00

VENDOR #		INVOICE #	
10638		47004	
P.O. #	REC. RPT. #	INV. CD	INV. DATE
		1	010598
TERMS CODE	DUE DATE	FRY. BILL CD	SALES ORDER #
3			
INVOICE AMT		DISC. ALLOWED	
1690.00			
GL NUMBER	AMOUNT	WORK ORDER #	
C157 5920	1690.00		
DATE	APPROVED BY	ENTERED BY	

952

K. D. FEDDERSEN & CO. UEBERSEEGESELLSCHAFT



K. D. Feddersen & Co. Ueberseege. - P.O.B. 10 10 20 - D-20007 Hamburg

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P.O.B. 10 10 20
D-20007 Hamburg
Telefon 040/2 35 07-01
Telefax 040/2 35 07-450
Telex *2 163 481 kdfu d
Büro/Office
Cotenstr. 11 A
D-20097 Hamburg

Cedar Chemical Corp.
24th. Floor, 5100 Poplar Ave

38137 Memphis/TN.
U.S.A.

*COAES FIXED
FROM MANS*

Debit-Note

Number : 47004
Date : 05.01.98 / GSC
Client No : 23024
Contract-No : 716826
Page : 1

Contract-No : 716826-1
Invoice No : 215201

FREIGHT CONTRIBUTION TO SHIPMENT ON
JANUARY 4, 1998 ON MS "TAYSON LYKES"
FROM HAMBURG TO NEW ORLEANS

USD

1.690,00

Amt. : USD 1.690,00

Amt. : USD 1.690,00 0,00% VAT 0,00 Total : USD 1.690,00

K. D. FEDDERSEN & CO.
UEBERSEEGE. MEH

i. A.

Scholz

GILSCOT - GUIDROZ INTERNATIONAL

FIG NO 4054

MEMBER OF NATIONAL BULK & FORWARDERS ASSOCIATION OF AMERICA

2815 DIVISION STREET
SUITE 202
METairie, LA 70002 USA
PHONE (504) 887-8897
FAX (504) 887-8898

TO CEDAR CHEMICAL CORP.
HIGHWAY 242 SOUTH

WEST HELENA, AR 72390

ATTN: ACTS RECEIVABLE

INVOICE # 52901

OUR REFERENCE	DATE	YOUR REFERENCE			
52901	11/06/97	213780/3	ED PEDDERSEN		
CARRIER	ONBOARD DATE	PORT OF LOADING	PORT OF DISCHARGE	ETA	
"ALMERIA LYBES"	09/19/97	HAMBURG	NEW ORLEANS	10/28/97	
BILL OF LADING NO.	COMMODITY				
	1X40 LYKU2099395, 1X20LYTU3029567				

DIURON 21210 KGS AND 7484.1 KGS

ENCLOSURES	QTY	DESCRIPTION OF CHARGES	AMOUNT
BILLS OF LADING	1	AIR/OCEAN FREIGHT	240.00
BL. CERTIFICATE		INLAND FREIGHT	
CONSULAR INVOICE		DRAVAGE/PORT SERVICES	
COMMERCIAL INVOICE	1	INSURANCE	
BANK INSTRUCTION		CONSULAR FESS	
		DOCUMENT EXPRESS	
		OTHER	
		TELE HAND CHARGE	974.72

ENTERED
240.00

JAN 14 1998

974.72

219.58

130.69

225.00

80.00

10.00

25.00

WEST HELENA

VENDOR #		INVOICE #	
12347		52901	
P.O. #	REC. RPT. #	INV. CD	INV. DATE
		1	11/06/97
TERMS CODE	DUE DATE	FRT. BILL CD	SALES ORDER #
N			
INVOICE AMT.		DISC. ALLOWED	
1905.96			
GL NUMBER	AMOUNT	WORK ORDER #	
C1575920	1905.96		
DONE BY		APPROVED BY	
TK		gTW	
DATE		ENTERED BY	
1-13-98			

Diuron
OK
BC

1985.96

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ILSCOT - GUIDROZ INTERNATIONAL

INC NO 404

INTERNATIONAL NATIONAL PROCESS & FORWARDERS ASSOCIATION OF AMERICA

2818 BRIDSON STREET
SUITE 202
METAIRIE, LA 70002 USA
PHONE (504) 887-8897
FAX (504) 887-8898

WEST HELENA, AR 72390
ATTN: ACT9 RECEIVABLES

INVOICE # 52826

OUR REFERENCE	DATE	YOUR REFERENCE
---------------	------	----------------

52826 11/06/97 714.294 KD PEDDERSEN & CO.

CARRIER	ON BOARD DATE	PORT OF LOADING	PORT OF DISCHARGE	EYA
---------	---------------	-----------------	-------------------	-----

"GENEVEVE LINES" 09/19/97 HAMBURG NEW ORLEANS 10/13/97

BILL OF LADING NO.	COMMODITY
--------------------	-----------

1X40 FT CONTAINER 710 BAGS X30 KGS

21530 KGS DIURON TECH.

ENCLOSURES	ORIG.	COPY	DESCRIPTION OF CHARGES	AMOUNT
BILL OF LADING		1	AIR/OCEAN FREIGHT	
BILL CERTIFICATE			INLAND FREIGHT	
CONSULAR INVOICE			DRAYAGE/PORT SERVICES	
COMMERCIAL INVOICE		1	INSURANCE	
BANK INSTRUCTION			CONSULAR FEES	
			DOCUMENT EXPRESS	
			OTHER	
			TERM HAND CHG	

240 ENTERED
JAN 14 1998
541.06
WEST HELENA

164.61
97.98
225.00
80.00
14.50
45.00
26.00

VENDOR #		INVOICE #	
12347		52826	
P.O. #	REC. RPT. #	INV. CD	INV. DATE
		1	110697
TERMS CODE	DUE DATE	FRT. BILL CD	SALES ORDER #
N			
INVOICE AMT.	DISC. ALLOWED		
1434.15			
GL NUMBER	AMOUNT	WORK ORDER #	
C 15A 5920	1434.15		
187			
		9/12	
DONE BY	DATE	APPROVED BY	ENTERED BY
RK	1-13-98	[Signature]	

Diurnal OK BC

1434.15

A TRUE COPY OF EACH PARTMENT DOCUMENT
CREATED ELECTRONICALLY

Bayer - DCA

Load 4

	Date	Inv #	RR#	Drms	Net	Lbs	US\$	Per #	Price
DCA Purchase	2/6/98	3125016				36,368	59,822.07		1.645
DCA Purchase	2/6/98	3125017				36,368	59,822.07		1.645
DCA Purchase	2/6/98	3125018				36,368	59,822.07		1.645
DCA Purchase	2/6/98	3125019				36,368	59,822.07		1.645
						145,464			
Ocean Freight									0.000
Duty									0.000
Inland Freight									0.000
Inland Freight									0.000
Total Cost delivered to Hungary							239,288.28		1.645

Accounting:		\$ Dollars	Unit Cst
C153-5910		239,288.28	
C153-5920		0.00	
Total	145,464	239,288.28	1.645



West Helena Accr. Dept

REMIT TO:
BAYER CORPORATION
P.O. BOX 75662
CHARLOTTE, NC 28275-5662

RECEIVED
FEB 17 1998
RECEIVED

FIBERS ORGANICS AND RUBBER DIV
100 BAYER ROAD
PITTSBURGH, PA. 15205

ORDER INVOICE
BILL TO: 005761-001

NO: 3125016 DATE: 02-06-98 CO-21 DIV-10 DP-0012
EXPORT SHIP TO: 037539-001-009404

CEDAR CHEMICAL CORP
P.O. BOX 2749
W HELENA AR 72390

CEDAR CHEMICAL CORP
C/O INTERSEAPORT SERVICE
BREMERHAVEN
GERMANY 61

INVOICE

PLEASE RETURN THE "DUPLICATE INVOICE" COPY WITH
REMITTANCE TO INSURE PROPER PAYMENT IS APPLIED TO YOUR
ACCOUNT.

PURCHASE ORDER #: 04-108029
FOB: LEVERKUSEN, GE

ORDER INVOICE NO: 3125016 DATE: 02-06-98
FREIGHT: COLLECT DATE SHIPPED: 01-30-98

ITEM	CODES	DESCRIPTION	QUANTITY	UNIT PRICE	AMOUNT
01	N826	3,4-DICHLOROANILINE, PURE	36,366.00	1.64500	59,822.07
080081	06Y65388	66 X	551.00 LB	DRUM (1751)	

SPECIAL PRICING APPLIES

06Y65388

TERMS AND CONDITIONS FOR EACH ITEM

VENDOR #		INVOICE #	
2987		3125016	
P.O. #	REC. RPT. #	INV. CD	INV. DATE
108029		1	020698
TERMS CODE	DUE DATE	FRT. BILL CD	SALES ORDER #
2			
INVOICE AMT.		DISC. ALLOWED	
59,822.07			
GL NUMBER	AMOUNT	WORK ORDER #	
01538910	59,822.07		
DONE BY	DATE	APPROVED BY	ENTERED BY

59,822.07

LAST PAGE
CORPORATION

**0024

IF IN YOUR PURCHASE ORDER, YOUR ORDER IS ACCEPTED
IF SUCH CONTRACT EXISTS, YOUR ORDER IS ACCEPTED
TERMS AND CONDITIONS PRINTED ON THE REVERSE SIDE



RENIT TO:
 BAYER CORPORATION
 P.O. BOX 75662
 CHARLOTTE, NC 28276-5662

FIBERS ORGANICS AND RUBBER DIV
 100 BAYER ROAD
 PITTSBURGH, PA. 15205

ORDER INVOICE
 BILL TO: 005761-001

NO: 3125017 DATE: 02-06-98 CO-21 DIV-10 DP-0012
 EXPORT SHIP TO: 037539-001-009404

CEDAR CHEMICAL CORP
 P.O. BOX 2749
 W HELENA AR 72390

West Helena Acct Dept.

CEDAR CHEMICAL CORP
 C/O INTERSEAPORT SERVICE
 BREMERHAVEN
 GERMANY 61

RECEIVED
 FEB 17 1998
 RECEIVED

INVOICE

PLEASE RETURN THE "DUPLICATE INVOICE" COPY WITH
 REMITTANCE TO INSURE PROPER PAYMENT IS APPLIED TO YOUR
 ACCOUNT.

PURCHASE ORDER #: 04-108029
 FOB: LEVERKUSEN, GE

ORDER INVOICE NO: 3125017 DATE: 02-06-98
 FREIGHT: COLLECT DATE SHIPPED: 02-03-98

ITEM	CODES	DESCRIPTION	QUANTITY	UNIT PRICE	AMOUNT
01	N826	3,4-DICHLOROANILINE, PURE	36,366.00	1.64500	59,822.07
080081	06Y65389	66 X 551.00 LB DRUM (1751)			

SPECIAL PRICING APPLIES

06Y65389

TERMS AND CONDITIONS FOR EACH ITEM

VENDOR #		INVOICE #	
2987		3125017	
P.O. #	REC. RPT. #	INV. CD	INV. DATE
108029		1	020698
TERMS CODE	DUE DATE	FRT. BILL CD	SALES ORDER #
2			
INVOICE AMT.	DISC. ALLOWED		
59,822.07			
GL NUMBER	AMOUNT	WORK ORDER #	
01535910	59,822.07		
DONE BY	DATE	APPROVED BY	ENTERED BY
RR	2-29-98		

59,822.07

LAST PAGE
 CORPORATION

#0025

IF IN YOUR PURCHASE ORDER, YOUR ORDER IS ACCEPTED
 NO SUCH CONTRACT EXISTS, YOUR ORDER IS ACCEPTED
 TERMS AND CONDITIONS PRINTED ON THE REVERSE SIDE

corporation, Pittsburgh, PA 15205-9741

AB0000079443



REMIT TO:

BAYER CORPORATION
P.O. BOX 75662
CHARLOTTE, NC 28275-5662

FIBERS ORGANICS AND RUBBER DIV
100 BAYER ROAD
PITTSBURGH, PA. 15205

ORDER INVOICE
BILL TO: 005761-001

NO: 3125018 DATE: 02-06-98 CO-21 DIV-10 DP-0012
EXPORT SHIP TO: 037539-001-009404

CEDAR CHEMICAL CORP
P.O. BOX 2749
W HELENA AR 72390

West Helena Acct Dep:

RECEIVED
FEB 17 1998
RECEIVED

CEDAR CHEMICAL CORP
C/O INTERSEAPORT SERVICE
BREMERHAVEN
GERMANY 61

INVOICE

PLEASE RETURN THE "DUPLICATE INVOICE" COPY WITH
REMITTANCE TO INSURE PROPER PAYMENT IS APPLIED TO YOUR
ACCOUNT.

PURCHASE ORDER #: 04-108029
FOB: LEVERKUSEN, GE

ORDER INVOICE NO: 3125018 DATE: 02-06-98
FREIGHT: COLLECT DATE SHIPPED: 02-03-98

ITEM	CODES	DESCRIPTION	QUANTITY	UNIT PRICE	AMOUNT
01	N826	3,4-DICHLOROANILINE, PURE	36,366.00	1.64500	59,822.07
080081	06Y65390	66 X 551.00 LB DRUM (1751)			

SPECIAL PRICING APPLIES

06Y65390

ITEM CODE

VENDOR #		INVOICE #	
2987		3125018	
P.O. #	REC. RPT. #	INV. CD	INV. DATE
108029		1	020698
TERMS CODE	DUE DATE	FRT. BILL CD	SALES ORDER #
3			
INVOICE AMT.		DISC. ALLOWED	
59,822.07			
GL NUMBER	AMOUNT	WORK ORDER #	
C 153 3910	59,822.07		
DONE BY	DATE	APPROVED BY	ENTERED BY
RY	2 09 98	CTN	

59,822.07

LAST PAGE
CORPORATION

**0026

IN YOUR PURCHASE ORDER, YOUR ORDER IS ACCEPTED
IF SUCH CONTRACT EXISTS, YOUR ORDER IS ACCEPTED
TERMS AND CONDITIONS PRINTED ON THE REVERSE SIDE

Corporation Pittsburgh PA 15205-0741

AB0000079443

Bayer - DCA

Load 3

	Date	Inv #	RR#	Drms	Net	Lbs	US\$	Per # Price
DCA Purchase	1/9/98	3125015				36,366	59,822.07	1.645
DCA Purchase	1/9/98	3125014				36,366	59,822.07	1.645
DCA Purchase	1/9/98	3125009				36,366	59,822.07	1.645
DCA Purchase	1/9/98	3125012				36,366	59,822.07	1.645
						145,464		
Ocean Freight								0.000
Duty	2/6/98	53342					6,924.50	0.048
Inland Freight	2/6/98	41007					5,020.00	0.035
Inland Freight	2/6/98	41006					4,929.50	#DIV/0!
Total Cost delivered to Hungary Sold to Feddersen							256,162.28	1.761

Accounting:		\$ Dollars	Unit Cst
C153-5910		239,288.28	
C153-5920		16,874.00	
Total	145,464	256,162.28	1.761

Note: Resold to Feddersen Order #42607



REMIT TO:
BAYER CORPORATION
 P.O. BOX 75662
 CHARLOTTE, NC 28275-5662

FIBERS ORGANICS AND RUBBER DIV
 100 BAYER ROAD
 PITTSBURGH, PA. 15205

ORDER INVOICE
 BILL TO: 005761-001

NO:3125015 DATE: 01-09-98 CO-21 DIV-10 DP-0012
 EXPORT SHIP TO: 037539-001-009404

CEDAR CHEMICAL CORP
 P.O. BOX 2749
 W HELENA AR 72390

CEDAR CHEMICAL CORP
 C/O INTERSEAPORT SERVICE
 BREMERHAVEN
 GERMANY 61

DUPLICATE INVOICE

PLEASE RETURN THE "DUPLICATE INVOICE" COPY WITH
 REMITTANCE TO INSURE PROPER PAYMENT IS APPLIED TO YOUR
 ACCOUNT

PURCHASE ORDER #:04-108029
 FOB:LEVERKUSEN, GE

ORDER INVOICE NO: 3125015 DATE: 01-09-98
FREIGHT: COLLECT DATE SHIPPED: 01-09-98

ITEM	CODES	DESCRIPTION	QUANTITY	UNIT PRICE	AMOUNT
01	N826	3,4-DICHLOROANILINE, PURE	36,366.00	1.64500	59,822.07
080081	06Y65387	66 X 551.00 LB DRUM (1751)			

SPECIAL PRICING APPLIES

06Y65387

ITEM CODE TERMS AND CONDITIONS FOR EACH ITEM
 (0005) NET 30 DAYS

TOTAL AMOUNT FOR THIS ORDER INVOICE 59,822.07

*** EXPORT SHIPMENT ***

R36-D01-T001-P ---*** CO-21 DIV-10 009404 PAGE 1 LAST PAGE
 666 CUSTOMER REQUEST CARR *20CUS@ 0175 0175 BAYER CORPORATION **0035

TERMS AND CONDITIONS: NOTWITHSTANDING ANY CONTRARY OR INCONSISTENT CONDITIONS THAT MAY BE EMBODIED IN YOUR PURCHASE ORDER, YOUR ORDER IS ACCEPTED SUBJECT TO THE PRICES, TERMS AND CONDITIONS OF THE MUTUALLY EXECUTED CONTRACT BETWEEN US. OR, IF NO SUCH CONTRACT EXISTS, YOUR ORDER IS ACCEPTED SUBJECT TO OUR REGULAR SCHEDULED PRICE AND TERMS IN EFFECT AT TIME OF SHIPMENT AND SUBJECT TO THE TERMS AND CONDITIONS PRINTED ON THE REVERSE HEREOF

M8250
 Rev. 1/85

CUSTOMER'S INVOICE

Bayer Corporation, Pittsburgh, PA 15205

FORM M229A

AB0000079446

PLEASE INDICATE BELOW ANY COMMENTS OR QUESTIONS YOU HAVE REGARDING BILLING AND/OR PRODUCT DATA SHOWN ON THE INVOICE.

CONDITIONS

1. Seller reserves the right, among other remedies, either to cancel this contract or suspend further deliveries under it in the event Buyer fails to pay for any one shipment when same becomes due. Should Buyer's financial responsibility become unsatisfactory to Seller, cash payments or satisfactory security may be required by Seller.

2. Unless otherwise agreed, it is understood the product herein specified is for consumption in the United States of America.

3. Seller shall not be required to deliver in any month more than monthly quantity specified above, or if no monthly quantity specified, more than the pro rata amount of the maximum quantity specified.

4. Seller shall not be bound to tender delivery of any quantities for which Buyer has not given shipping instructions.

5. Deliveries may be suspended by either party in case of act of God, war, riots, fire, explosion, flood, strike, lockout, injunction, inability to obtain fuel, power, raw materials, labor, containers, or transportation facilities, accident, breakage of machinery or apparatus, national defense requirements, or other causes beyond the control of either party, preventing the manufacture, shipment, acceptance or consumption of a shipment of the product, or of a material upon which the manufacture of the product of this contract is dependent. Such deliveries so suspended shall be cancelled without liability, but the contract shall otherwise remain unaffected. Seller may during any period of shortage due to any of said causes, allocate its supply of such raw materials or goods among itself, for its own manufacturing uses, and its customers in such manner as Seller deems practicable.

6. In case of bulk carload, tank truck or tank car shipments, shipper's weights, certified to by sworn weighmaster, shall govern.

7. Seller warrants title and that all goods sold hereunder shall conform to Seller's specifications, if any. Subject to the preceding sentence and except as otherwise stated herein, SELLER MAKES NO WARRANTY EXTENDING BEYOND THE DESCRIPTION OF THE GOODS ON THE FACE HEREOF. THERE ARE NO OTHER WARRANTIES OF ANY KIND, EXPRESS OR IMPLIED, AS TO MERCHANTABILITY, FITNESS FOR ANY PARTICULAR PURPOSE, OR ANY OTHER MATTER WITH RESPECT TO THE GOODS. SELLER SHALL NOT BE LIABLE FOR ANY INCIDENTAL OR CONSEQUENTIAL DAMAGES. Claims on account of weight, quality, loss of or damage to the product shall be made in writing as promptly as possible. Seller's liability for damages shall in no event exceed the purchase price of the particular delivery with respect to which damages are claimed. Unless otherwise stated, Seller's standard specifications for quality shall govern. Without limiting the generality of the foregoing, Buyer expressly assumes all risk of patent infringement by reason of its use of material provided hereunder in combination with other material or in the operation of any process.

8. Any tax or governmental charge or increase in same hereafter becoming effective increasing the cost to Seller of producing, selling or delivering the product or of procuring materials used therein, and any tax now in effect or increase in same payable by Seller because of this sale, such as Sales Tax, Use Tax, Retailer's Occupational Tax, Gross Receipts Tax, may, at Seller's option, be added to the price herein specified.

9. The price, point of delivery and terms of payment herein specified may be revised by Seller to reflect Seller's list price, point of delivery and terms of payment in effect at the time of shipment.

10. If Seller desires to revise the price, point of delivery or terms of payment pursuant to the preceding paragraph, but is restricted to any extent against so doing by reason of any law, decree, order or regulation of any government, or if the price, point of delivery or terms of payment then in effect is altered by reasons of any law, decree, order or regulation of any government, Seller shall have the right to terminate this contract.

11. Any increase in freight rates paid by Seller on shipments covered by this contract, may, at Seller's option, be added to the price of the material shipped under this contract.

12. Where shipment requires use by Seller of carboys, drums, barrels, or other returnable containers, title to such containers shall remain in Seller and a deposit in the amount required by Seller must be made at the time the product is paid for to insure the return of the container to point of shipment. Such containers must be kept in good condition and may not be used for any material other than that shipped therein, and must be returned within sixty (60) days from date of shipment. I.C.C. regulations require that empty drums must have filling and vent holes properly closed and empty carboys must be thoroughly (completely) drained. On such containers being so returned in good condition, a refund of the deposit will be made.

13. This contract shall bind the successors and assignees of the parties hereto at the option of Seller.

14. This document is not an Expression of Acceptance or a Confirmation document as contemplated in Section 2-207 of the Uniform Commercial Code. The acceptance of any order entered by Buyer is expressly conditioned on Buyer's assent to any additional or conflicting terms contained herein.

15. It is mutually agreed by and between the parties hereto that this contract shall be construed under the laws of the state mentioned in the address of the Buyer division listed on the front hereof.

16. These goods were produced in compliance with all applicable requirements of sections 6, 7 and 12 of the Fair Labor Standards Act, as amended, and of regulations and orders of the United States Department of Labor issued under Section 14 thereof.

PLEASE INDICATE BELOW ANY COMMENTS OR QUESTIONS YOU HAVE REGARDING BILLING AND/OR PRODUCT DATA SHOWN ON THE INVOICE.

CONDITIONS

1. Seller reserves the right, among other remedies, either to cancel this contract or suspend further deliveries under it in the event Buyer fails to pay for any one shipment when same becomes due. Should Buyer's financial responsibility become unsatisfactory to Seller, cash payments or satisfactory security may be required by Seller.
2. Unless otherwise agreed, it is understood the product herein specified is for consumption in the United States of America.
3. Seller shall not be required to deliver in any month more than monthly quantity specified above, or if no monthly quantity specified, more than the pro rata amount of the maximum quantity specified.
4. Seller shall not be bound to tender delivery of any quantities for which Buyer has not given shipping instructions.
5. Deliveries may be suspended by either party in case of act of God, war, riots, fire, explosion, flood, strike, lockout, injunction, inability to obtain fuel, power, raw materials, labor, containers, or transportation facilities, accident, breakage of machinery or apparatus, national defense requirements, or other causes beyond the control of either party, preventing the manufacture, shipment, acceptance or consumption of a shipment of the product, or of a material upon which the manufacture of the product of this contract is dependent. Such deliveries so suspended shall be cancelled without liability, but the contract shall otherwise remain unaffected. Seller may during any period of shortage due to any of said causes, allocate its supply of such raw materials or goods among itself, for its own manufacturing uses, and its customers in such manner as Seller deems practicable.
6. In case of bulk carload, tank truck or tank car shipments, shipper's weights, certified to by sworn weighmaster, shall govern.
7. Seller warrants title and that all goods sold hereunder shall conform to Seller's specifications, if any. Subject to the preceding sentence and except as otherwise stated herein, SELLER MAKES NO WARRANTY EXTENDING BEYOND THE DESCRIPTION OF THE GOODS ON THE FACE HEREOF. THERE ARE NO OTHER WARRANTIES OF ANY KIND, EXPRESS OR IMPLIED, AS TO MERCHANTABILITY, FITNESS FOR ANY PARTICULAR PURPOSE, OR ANY OTHER MATTER WITH RESPECT TO THE GOODS. SELLER SHALL NOT BE LIABLE FOR ANY INCIDENTAL OR CONSEQUENTIAL DAMAGES. Claims on account of weight, quality, loss of or damage to the product shall be made in writing as promptly as possible. Seller's liability for damages shall in no event exceed the purchase price of the particular delivery with respect to which damages are claimed. Unless otherwise stated, Seller's standard specifications for quality shall govern. Without limiting the generality of the foregoing, Buyer expressly assumes all risk of patent infringement by reason of its use of material provided hereunder in combination with other material or in the operation of any process.
8. Any tax or governmental charge or increase in same hereafter becoming effective increasing the cost to Seller of producing, selling or delivering the product or of procuring materials used therein, and any tax now in effect or increase in same payable by Seller because of this sale, such as Sales Tax, Use Tax, Retailer's Occupational Tax, Gross Receipts Tax, may, at Seller's option, be added to the price herein specified.
9. The price, point of delivery and terms of payment herein specified may be revised by Seller to reflect Seller's list price, point of delivery and terms of payment in effect at the time of shipment.
10. If Seller desires to revise the price, point of delivery or terms of payment pursuant to the preceding paragraph, but is restricted to any extent against so doing by reason of any law, decree, order or regulation of any government, or if the price, point of delivery or terms of payment then in effect is altered by reasons of any law, decree, order or regulation of any government, Seller shall have the right to terminate this contract.
11. Any increase in freight rates paid by Seller on shipments covered by this contract, may, at Seller's option, be added to the price of the material shipped under this contract.
12. Where shipment requires use by Seller of carboys, drums, barrels, or other returnable containers, title to such containers shall remain in Seller and a deposit in the amount required by Seller must be made at the time the product is paid for to insure the return of the container to point of shipment. Such containers must be kept in good condition and may not be used for any material other than that shipped therein, and must be returned within sixty (60) days from date of shipment. L.C.C. regulations require that empty drums must have filling and vent holes properly closed and empty carboys must be thoroughly (completely) drained. On such containers being so returned in good condition, a refund of the deposit will be made.
13. This contract shall bind the successors and assignees of the parties hereto at the option of Seller.
14. This document is not an Expression of Acceptance or a Confirmation document as contemplated in Section 2-207 of the Uniform Commercial Code. The acceptance of any order entered by Buyer is expressly conditioned on Buyer's assent to any additional or conflicting terms contained herein.
15. It is mutually agreed by and between the parties hereto that this contract shall be construed under the laws of the state mentioned in the address of the Buyer division listed on the front hereof.
16. These goods were produced in compliance with all applicable requirements of sections 6, 7 and 12 of the Fair Labor Standards Act, as amended, and of regulations and orders of the United States Department of Labor issued under Section 14 thereof.



REMIT TO:
BAYER CORPORATION
 P.O. BOX 75662
 CHARLOTTE, NC 28275-5662

FIBERS ORGANICS AND RUBBER DIV
 100 BAYER ROAD
 PITTSBURGH, PA. 15205

ORDER INVOICE
 BILL TO: 005761-001

NO: 3125009 DATE: 01-09-98 CO-21 DIV-10 DP-0012
 EXPORT SHIP TO: 037539-001-009404

CEDAR CHEMICAL CORP
 P.O. BOX 2749
 W HELENA AR 72390

CEDAR CHEMICAL CORP
 C/O INTERSEAPORT SERVICE
 BREMERHAVEN
 GERMANY 61

DUPLICATE INVOICE

PLEASE RETURN THE "DUPLICATE INVOICE" COPY WITH
 REMITTANCE TO INSURE PROPER PAYMENT IS APPLIED TO YOUR
 ACCOUNT

PURCHASE ORDER #: 04-108029
 FOB: LEVERKUSEN, GE

ORDER INVOICE NO: 3125009 DATE: 01-09-98
 FREIGHT: COLLECT DATE SHIPPED: 01-09-98

ITEM	CODES	DESCRIPTION	QUANTITY	UNIT PRICE	AMOUNT
01	N826	3,4-DICHLOROANILINE, PURE	36,366.00	1.64500	59,822.07
080081	06Y65384	66 X 551.00 LB DRUM (1751)			

SPECIAL PRICING APPLIES

06Y65384

ITEM CODE TERMS AND CONDITIONS FOR EACH ITEM
 (0005) NET 30 DAYS

TOTAL AMOUNT FOR THIS ORDER INVOICE 59,822.07

* * * E X P O R T S H I P M E N T * * *

R36-D01-T001-P --*** CO-21 DIV-10 009404 PAGE 1 LAST PAGE
 666 CUSTOMER REQUEST CARR *20CUSE@ 0175 0175 BAYER CORPORATION

**0032

TERMS AND CONDITIONS: NOTWITHSTANDING ANY CONTRARY OR INCONSISTENT CONDITIONS THAT MAY BE EMBODIED IN YOUR PURCHASE ORDER YOUR ORDER IS ACCEPTED
 SUBJECT TO THE PRICES, TERMS AND CONDITIONS OF THE MUTUALLY EXECUTED CONTRACT BETWEEN US OR IF NO SUCH CONTRACT EXISTS, YOUR ORDER IS ACCEPTED
 SUBJECT TO OUR REGULAR SCHEDULED PRICE AND TERMS IN EFFECT AT TIME OF SHIPMENT AND SUBJECT TO THE TERMS AND CONDITIONS PRINTED ON THE REVERSE
 HEREOF

M8258
 Rev 1/95

CUSTOMER'S INVOICE

Bayer Corporation, Pittsburgh, PA 15205-8741

FORM M258A

AB000007944

PLEASE INDICATE BELOW ANY COMMENTS OR QUESTIONS YOU HAVE REGARDING BILLING AND/OR PRODUCT DATA SHOWN ON THE INVOICE.

CONDITIONS

1. Seller reserves the right, among other remedies, either to cancel this contract or suspend further deliveries under it in the event Buyer fails to pay for any one shipment when same becomes due. Should Buyer's financial responsibility become unsatisfactory to Seller, cash payments or satisfactory security may be required by Seller.
2. Unless otherwise agreed, it is understood the product herein specified is for consumption in the United States of America.
3. Seller shall not be required to deliver in any month more than monthly quantity specified above, or if no monthly quantity specified, more than the pro rata amount of the maximum quantity specified.
4. Seller shall not be bound to tender delivery of any quantities for which Buyer has not given shipping instructions.
5. Deliveries may be suspended by either party in case of act of God, war, riots, fire, explosion, flood, strike, lockout, injunction, inability to obtain fuel, power, raw materials, labor, containers, or transportation facilities, accident, breakage of machinery or apparatus, national defense requirements, or other causes beyond the control of either party, preventing the manufacture, shipment, acceptance or consumption of a shipment of the product, or of a material upon which the manufacture of the product of this contract is dependent. Such deliveries so suspended shall be cancelled without liability, but the contract shall otherwise remain unaffected. Seller may during any period of shortage due to any of said causes, allocate its supply of such raw materials or goods among itself, for its own manufacturing uses, and its customers in such manner as Seller deems practicable.
6. In case of bulk carload, tank truck or tank car shipments, shipper's weights, certified to by sworn weighmaster, shall govern.
7. Seller warrants title and that all goods sold hereunder shall conform to Seller's specifications, if any. Subject to the preceding sentence and except as otherwise stated herein, SELLER MAKES NO WARRANTY EXTENDING BEYOND THE DESCRIPTION OF THE GOODS ON THE FACE HEREOF. THERE ARE NO OTHER WARRANTIES OF ANY KIND, EXPRESS OR IMPLIED, AS TO MERCHANTABILITY, FITNESS FOR ANY PARTICULAR PURPOSE, OR ANY OTHER MATTER WITH RESPECT TO THE GOODS. SELLER SHALL NOT BE LIABLE FOR ANY INCIDENTAL OR CONSEQUENTIAL DAMAGES. Claims on account of weight, quality, loss of or damage to the product shall be made in writing as promptly as possible. Seller's liability for damages shall in no event exceed the purchase price of the particular delivery with respect to which damages are claimed. Unless otherwise stated, Seller's standard specifications for quality shall govern. Without limiting the generality of the foregoing, Buyer expressly assumes all risk of patent infringement by reason of its use of material provided hereunder in combination with other material or in the operation of any process.
8. Any tax or governmental charge or increase in same hereafter becoming effective increasing the cost to Seller of producing, selling or delivering the product or of procuring materials used therein, and any tax now in effect or increase in same payable by Seller because of this sale, such as Sales Tax, Use Tax, Retailer's Occupational Tax, Gross Receipts Tax, may, at Seller's option, be added to the price herein specified.
9. The price, point of delivery and terms of payment herein specified may be revised by Seller to reflect Seller's list price, point of delivery and terms of payment in effect at the time of shipment.
10. If Seller desires to revise the price, point of delivery or terms of payment pursuant to the preceding paragraph, but is restricted to any extent against so doing by reason of any law, decree, order or regulation of any government, or if the price, point of delivery or terms of payment then in effect is altered by reasons of any law, decree, order or regulation of any government, Seller shall have the right to terminate this contract.
11. Any increase in freight rates paid by Seller on shipments covered by this contract, may, at Seller's option, be added to the price of the material shipped under this contract.
12. Where shipment requires use by Seller of carboys, drums, barrels, or other returnable containers, title to such containers shall remain in Seller and a deposit in the amount required by Seller must be made at the time the product is paid for to insure the return of the container to point of shipment. Such containers must be kept in good condition and may not be used for any material other than that shipped therein, and must be returned within sixty (60) days from date of shipment. I.C.C. regulations require that empty drums must have filling and vent holes properly closed and empty carboys must be thoroughly (completely) drained. On such containers being so returned in good condition, a refund of the deposit will be made.
13. This contract shall bind the successors and assignees of the parties hereto at the option of Seller.
14. This document is not an Expression of Acceptance or a Confirmation document as contemplated in Section 2-207 of the Uniform Commercial Code. The acceptance of any order entered by Buyer is expressly conditioned on Buyer's assent to any additional or conflicting terms contained herein.
15. It is mutually agreed by and between the parties hereto that this contract shall be construed under the laws of the state mentioned in the address of the Buyer division listed on the front hereof.
16. These goods were produced in compliance with all applicable requirements of sections 6, 7 and 12 of the Fair Labor Standards Act, as amended, and of regulations and orders of the United States Department of Labor issued under Section 14 thereof.



REMIT TO:
 BAYER CORPORATION
 P.O. BOX 75662
 CHARLOTTE, NC 28275-5662

FIBERS ORGANICS AND RUBBER DIV
 100 BAYER ROAD
 PITTSBURGH, PA. 15205

ORDER INVOICE
 BILL TO: 005761-001

NO:3125012 DATE: 01-09-98 CO-21 DIV-10 DP-0012
 EXPORT SHIP TO: 037539-001-009404

CEDAR CHEMICAL CORP
 P.O. BOX 2749
 W HELENA AR 72390

CEDAR CHEMICAL CORP
 C/O INTERSEAPORT SERVICE
 BREMERHAVEN
 GERMANY 61

DUPLICATE INVOICE

PLEASE RETURN THE "DUPLICATE INVOICE" COPY WITH
 REMITTANCE TO INSURE PROPER PAYMENT IS APPLIED TO YOUR
 ACCOUNT

PURCHASE ORDER #:04-108029
 FOB:LEVERKUSEN, GE

ORDER INVOICE NO: 3125012 DATE: 01-09-98
 FREIGHT: COLLECT DATE SHIPPED: 01-09-98

ITEM	CODES	DESCRIPTION	QUANTITY	UNIT PRICE	AMOUNT
01	N826	3,4-DICHLOROANILINE, PURE	36,366.00	1.64500	59,822.07
080081	06Y65385	66 X 551.00 LB DRUM (1751)			

SPECIAL PRICING APPLIES

06Y65385

ITEM CODE TERMS AND CONDITIONS FOR EACH ITEM
 (0005) NET 30 DAYS

TOTAL AMOUNT FOR THIS ORDER INVOICE 59,822.07

* * * EXPORT SHIPMENT * * *

R36-D01-T001-P --*** CO-21 DIV-10 009404 PAGE 1 LAST PAGE
 666 CUSTOMER REQUEST CARR *20CUS@ 0175 0175 BAYER CORPORATION

**0033

TERMS AND CONDITIONS NOTWITHSTANDING ANY CONTRARY OR INCONSISTENT CONDITIONS THAT MAY BE EMBODIED IN YOUR PURCHASE ORDER YOUR ORDER IS ACCEPTED
 SUBJECT TO THE PRICES, TERMS AND CONDITIONS OF THE MUTUALLY EXECUTED CONTRACT BETWEEN US, OR IF NO SUCH CONTRACT EXISTS YOUR ORDER IS ACCEPTED
 SUBJECT TO OUR REGULAR SCHEDULED PRICE AND TERMS IN EFFECT AT TIME OF SHIPMENT AND SUBJECT TO THE TERMS AND CONDITIONS PRINTED ON THE REVERSE
 HEREOF

MB258
 Rev. 1/95

CUSTOMER'S INVOICE

Bayer Corporation, Pittsburgh, PA 15205-0741

FORM M258A

AB000007944

PLEASE INDICATE BELOW ANY COMMENTS OR QUESTIONS YOU HAVE REGARDING BILLING AND/OR PRODUCT DATA SHOWN ON THE INVOICE.

CONDITIONS

1. Seller reserves the right, among other remedies, either to cancel this contract or suspend further deliveries under it in the event Buyer fails to pay for any one shipment when same becomes due. Should Buyer's financial responsibility become unsatisfactory to Seller, cash payments or satisfactory security may be required by Seller.
2. Unless otherwise agreed, it is understood the product herein specified is for consumption in the United States of America.
3. Seller shall not be required to deliver in any month more than monthly quantity specified above, or if no monthly quantity specified, more than the pro rata amount of the maximum quantity specified.
4. Seller shall not be bound to tender delivery of any quantities for which Buyer has not given shipping instructions.
5. Deliveries may be suspended by either party in case of act of God, war, riots, fire, explosion, flood, strike, lockout, injunction, inability to obtain fuel, power, raw materials, labor, containers, or transportation facilities, accident, breakage of machinery or apparatus, national defense requirements, or other causes beyond the control of either party, preventing the manufacture, shipment, acceptance or consumption of a shipment of the product, or of a material upon which the manufacture of the product of this contract is dependent. Such deliveries so suspended shall be cancelled without liability, but the contract shall otherwise remain unaffected. Seller may during any period of shortage due to any of said causes, allocate its supply of such raw materials or goods among itself, for its own manufacturing uses, and its customers in such manner as Seller deems practicable.
6. In case of bulk carload, tank truck or tank car shipments, shipper's weights, certified to by sworn weighmaster, shall govern.
7. Seller warrants title and that all goods sold hereunder shall conform to Seller's specifications, if any. Subject to the preceding sentence and except as otherwise stated herein, SELLER MAKES NO WARRANTY EXTENDING BEYOND THE DESCRIPTION OF THE GOODS ON THE FACE HEREOF. THERE ARE NO OTHER WARRANTIES OF ANY KIND, EXPRESS OR IMPLIED, AS TO MERCHANTABILITY, FITNESS FOR ANY PARTICULAR PURPOSE, OR ANY OTHER MATTER WITH RESPECT TO THE GOODS. SELLER SHALL NOT BE LIABLE FOR ANY INCIDENTAL OR CONSEQUENTIAL DAMAGES. Claims on account of weight, quality, loss of or damage to the product shall be made in writing as promptly as possible. Seller's liability for damages shall in no event exceed the purchase price of the particular delivery with respect to which damages are claimed. Unless otherwise stated, Seller's standard specifications for quality shall govern. Without limiting the generality of the foregoing, Buyer expressly assumes all risk of patent infringement by reason of its use of material provided hereunder in combination with other material or in the operation of any process.
8. Any tax or governmental charge or increase in same hereafter becoming effective increasing the cost to Seller of producing, selling or delivering the product or of procuring materials used therein, and any tax now in effect or increase in same payable by Seller because of this sale, such as Sales Tax, Use Tax, Retailer's Occupational Tax, Gross Receipts Tax, may, at Seller's option, be added to the price herein specified.
9. The price, point of delivery and terms of payment herein specified may be revised by Seller to reflect Seller's list price, point of delivery and terms of payment in effect at the time of shipment.
10. If Seller desires to revise the price, point of delivery or terms of payment pursuant to the preceding paragraph, but is restricted to any extent against so doing by reason of any law, decree, order or regulation of any government, or if the price, point of delivery or terms of payment then in effect is altered by reasons of any law, decree, order or regulation of any government, Seller shall have the right to terminate this contract.
11. Any increase in freight rates paid by Seller on shipments covered by this contract, may, at Seller's option, be added to the price of the material shipped under this contract.
12. Where shipment requires use by Seller of carboys, drums, barrels, or other returnable containers, title to such containers shall remain in Seller and a deposit in the amount required by Seller must be made at the time the product is paid for to insure the return of the container to point of shipment. Such containers must be kept in good condition and may not be used for any material other than that shipped therein, and must be returned within sixty (60) days from date of shipment. I.C.C. regulations require that empty drums must have filling and vent holes properly closed and empty carboys must be thoroughly (completely) drained. On such containers being so returned in good condition, a refund of the deposit will be made.
13. This contract shall bind the successors and assignees of the parties hereto at the option of Seller.
14. This document is not an Expression of Acceptance or a Confirmation document as contemplated in Section 2-207 of the Uniform Commercial Code. The acceptance of any order entered by Buyer is expressly conditioned on Buyer's assent to any additional or conflicting terms contained herein.
15. It is mutually agreed by and between the parties hereto that this contract shall be construed under the laws of the state mentioned in the address of the Buyer division listed on the front hereof.
16. These goods were produced in compliance with all applicable requirements of sections 6, 7 and 12 of the Fair Labor Standards Act, as amended, and of regulations and orders of the United States Department of Labor issued under Section 14 thereof.

AB00007944



REMIT TO:
 BAYER CORPORATION
 P.O. BOX 75662
 CHARLOTTE, NC 28275-5662

FIBERS ORGANICS AND RUBBER DIV
 100 BAYER ROAD
 PITTSBURGH, PA. 15205

ORDER INVOICE
 BILL TO: 005761-001

NO: 3125012 DATE: 01-09-98 CO-21 DIV-10 DP-0012
 EXPORT SHIP TO: 037539-001-009404

CEDAR CHEMICAL CORP
 P.O. BOX 2749
 W HELENA AR 72390

West Helena Accd. Dept.

CEDAR CHEMICAL CORP
 C/O INTERSEAPORT SERVICE
 BREMERHAVEN
 GERMANY 61

RECEIVED
 JAN 23 1998
 RECEIVED

INVOICE

PLEASE RETURN THE "DUPLICATE INVOICE" COPY WITH
 REMITTANCE TO INSURE PROPER PAYMENT IS APPLIED TO YOUR
 ACCOUNT.

PURCHASE ORDER #: 04-108029
 FOB: LEVERKUSEN, GR

ORDER INVOICE NO: 3125012 DATE: 01-09-98
 FREIGHT: COLLECT DATE SHIPPED: 01-09-98

ITEM	CODES	DESCRIPTION	QUANTITY	UNIT PRICE	AMOUNT
01	NB26	3,4-DICHLOROANILINE, PURE	36,366.00	1.64500	59,822.07

080081 06Y65385 66 X 551.00 LB DRUM (175) ENTERED

SPECIAL PRICING APPLIES

06Y65385

FEB 19 1998

TERMS AND CONDITIONS FOR EACH ITEM

WEST HELENA

59,822.07

VENDOR #		INVOICE #	
2987		3125012	
P.O. #	REC. RPT. #	INV. CD	INV. DATE
108029		1	010998
TERMS CODE	DUE DATE	FRT. BILL CD	SALES ORDER #
2			
INVOICE AMT.	DISC. ALLOWED		
59,822.07			
GL NUMBER	AMOUNT	WORK ORDER #	
0153 5910	59,822.07		
		2987	
DONE BY	DATE	APPROVED	

LAST PAGE
 CORPORATION

**0039

ED IN YOUR PURCHASE ORDER. YOUR ORDER IS ACCEPTED
 NO SUCH CONTRACT EXISTS. YOUR ORDER IS ACCEPTED
 TERMS AND CONDITIONS PRINTED ON THE REVERSE SIDE



ILSCOT - GUIDROZ INTERNATIONAL

FMC NO 4054

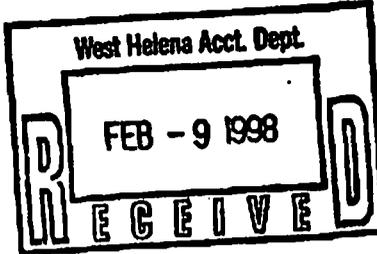
MEMBER OF NATIONAL BROKERS & FORWARDERS
ASSOCIATION OF AMERICA

2815 DIVISION STREET
SUITE 202
METAIRIE, LA 70002 USA
PHONE (504) 887-8897
FAX (504) 887-8898

TO: CEDAR CHEMICAL CORP.
HIGHWAY 242 SOUTH

WEST HELENA, AR 72390

ATTN: ACTS RECEIVABLE



INVOICE # 53342

OUR REFERENCE	DATE	YOUR REFERENCE
---------------	------	----------------

53220 02/06/98

BAYER LEVERKUSEN TO SAJOBABONY HUNGARY

CARRIER	ON BOARD DATE	PORT OF LOADING	PORT OF DISCHARGE	ETA
---------	---------------	-----------------	-------------------	-----

/ /

GERMANY

SAJABABONY

01/23/98

BILL OF LADING NO.	COMMODITY
--------------------	-----------

3,4DCS-4 TRUCKLOADS 66 DRS EACH

39600 TO ARRIVE FEB 2,3,4,1998

ENCLOSURES	ORIG.	COPY	DESCRIPTION OF CHARGES	AMOUNT
BILLS OF LADING			AIR/OCEAN FREIGHT	
INS. CERTIFICATE			INLAND FREIGHT	
CONSULAR INVOICE			DRAYAGE/PORT SERVICES	
COMMERCIAL INVOICE			INSURANCE	
BANK INSTRUCTION			CONSULAR FEES	
			DOCUMENT EXPRESS	
			OTHER	

ENTERED
FEB 13 1998
WEST HELENA

VENDOR #		INVOICE #	
12347		53342	
P.O. #	REC. RPT. #	INV. CD	INV. DATE
			020698
TERMS CODE	DUE DATE	FRT. BILL CD	SALES ORDER #
N			
INVOICE AMT.	DISC. ALLOWED		
6924.50			
GL NUMBER	AMOUNT	WORK ORDER #	
C 1535920	6924.50		
DONE BY	DATE	APPROVED BY	ENTERED BY

6625.00

225.00

14.50

25.00

35.00

BY CHECK

\$ 6924.50

IF YOU

KEEP AND A TRUE COPY OF EACH PERTINENT DOCUMENT
OF ANY REBATE DIRECTLY, OR INDIRECTLY.

AB0000079449



ILSCOT - GUIDROZ INTERNATIONAL

FMC NO 4054

MEMBER OF NATIONAL BROKERS & FORWARDERS
ASSOCIATION OF AMERICA

2815 DIVISION STREET
SUITE 202
METAIRIE, LA 70002 USA
PHONE (504) 887-8897
FAX (504) 887-8898

TO: CEDAR CHEMICAL CORP.
HIGHWAY 242 SOUTH

WEST HELENA, AR 72390

ATTN: ACTS RECEIVABLE

INVOICE # 41007



OUR REFERENCE	DATE	YOUR REFERENCE
41007	02/06/98	BAYER TANKS FROM GERMANY

CARRIER	ON BOARD DATE	PORT OF LOADING	PORT OF DISCHARGE	ETA
	/ /	ROTTERDAM	NOLA	ENTERED / /

BILL OF LADING NO.	COMMODITY
	PICK UP NOLA/TRUCK TO W.HELENA

RETURN TO NOLA EMPTY AND IDSCHARGE TANK TO LEASING COMPANY

FEB 13 1998

ENCLOSURES	ORIG.	COPY	DESCRIPTION OF CHARGES	AMOUNT
BILLS OF LADING			AIR/OCEAN FREIGHT	40.00
INS. CERTIFICATE			INLAND FREIGHT	930.00
CONSULAR INVOICE			DRAYAGE/PORT SERVICES	385.00
			INSURANCE	930.00
			CONSULAR FEES	385.00

WEST HELENA

VENDOR #		INVOICE #		40.00
12347		41007		
P.O. #	REC. RPT. #	INV. CD	INV. DATE	930.00
		1	02/06/98	385.00
TERMS CODE	DUE DATE	FRT. BIL CD	SALES ORDER #	930.00
B				385.00
INVOICE AMT.	DISC. ALLOWED			930.00
5020.00				245.00
GL NUMBER	AMOUNT	WORK ORDER #		930.00
C 153 8920	5020.00			245.00
DONE BY		DATE	APPROVED BY	ENTERED BY
RK		2-11-98	gfw	

\$ 5020.00

YOU.

Master Paper Products

RELATING TO THESE CHARGES. THIS COMPANY HAS A POLICY AGAINST PAYMENT SOLICITATION, OR RECEIPT OF ANY REBATE DIRECTLY, OR INDIRECTLY, WHICH WOULD BE UNLAWFUL UNDER THE UNITED STATES SHIPPING ACT OF 1984.



GILSCOT - GUIDROZ INTERNATIONAL

FMC NO 4054

MEMBER OF NATIONAL BROKERS & FORWARDERS ASSOCIATION OF AMERICA

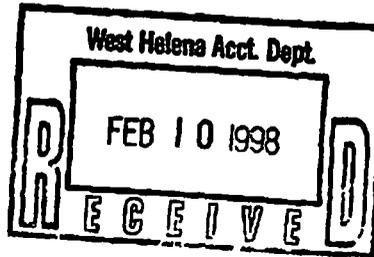
2815 DIVISION STREET
SUITE 202
METAIRIE, LA 70002 USA
PHONE (504) 887-8897
FAX (504) 887-8898

TO: CEDAR CHEMICAL CORP.
HIGHWAY 242 SOUTH

WEST HELENA, AR 72390

ATTN: ACTS RECEIVABLE

INVOICE # 41006



OUR REFERENCE	DATE	YOUR REFERENCE
---------------	------	----------------

41006 02/06/98

BAYER TANKS FROM GERMANY

CARRIER	ON BOARD DATE	PORT OF LOADING	PORT OF DISCHARGE	ETA
---------	---------------	-----------------	-------------------	-----

/ / ROTTERDAM

NOLA

BILL OF LADING NO.	COMMODITY:
--------------------	------------

PICK UP NOLA /TRUCK TO W.HELENA

ENTERED

RETURN TO NOLA EMPTY AND DISCHARGE TANK TO LEASING COMPANY

FEB 13 1998

ENCLOSURES	ORIG.	COPY	DESCRIPTION OF CHARGES	AMOUNT
BILLS OF LADING			AIR/OCEAN FREIGHT	
INS. CERTIFICATE			INLAND FREIGHT	
CONSULAR INVOICE			DRAYAGE/PORT SERVICES	
COMMERCIAL INVOICE			INSURANCE	
BANK INSTRUCTION			CONSULAR FEES	
			DOCUMENT EXPRESS	14.50
			OTHER	
			GILSCOT HANDLING@10.	40.00

WEST HELENA

930.00
280.00
930.00
245.00
930.00
315.00
930.00
315.00

VENDOR #		INVOICE #	
12347		41006	
P.O. #	REC. RPT. #	INV. CD	INV. DATE
		1	020698
TERMS CODE	DUE DATE	FAT BILL CD	SALES ORDER #
N			
INVOICE AMT.	DISC. ALLOWED		
4929.50			
GL NUMBER	AMOUNT	WORK ORDER #	
0153 5920	4929.50		
DONE BY	DATE	APPROVED BY	ENTERED BY
RK	2-11-98	HTW	

\$ 4929.50

IF YOU

NEED AND A TRUE COPY OF EACH PERTINENT DOCUMENT OF ANY REBATE DIRECTLY, OR INDIRECTLY.

AB0000079449

KEEP OPEN

PRINT DATE 6/25/97 TIME 8:13:45

CEDAR CHEMICAL CORPORATION
MEMPHIS, TN.

ORDER DATE 4/23/97
ORDER NUMBER 42607

*****OFFICE COPY*****

SOLD TO:
K. D. FEDDERSEN & CO.
UEBERSEEGESELLSCHAFT MBH
GOTENSTRABE 11 A
P.O. BOX 10 10 20
HAMBURG GERMANY 20007

SHIP TO
K.D. FEDDERSEN
EXPORT
SAJOBABONY, HUNGARY
5
1
00000-0000

CHANGE ORDER

REQUESTED	CUST. NO.	CUST. ORDER NO.	SALESMAN	FRT. PPD/COL
4/23/97	347E-00	715027	J. WHITSITT	PREPAID

SHIPPED FROM	FOB POINT	SHIP VIA	TERMS
WEST HELENA PLANT	SHIPPING POINT TRK		NET DUE 30 DAYS

QTY ORDERED	CONTAINER SIZE	ITEM NUMBER	DESCRIPTION	UNIT PRICE	BILLING UNIT	EXTENDED SALE PRICE
-------------	----------------	-------------	-------------	------------	--------------	---------------------

145200	LBS	3020	DCA	BULK	LBS	217,800.00
--------	-----	------	-----	------	-----	------------

145404
 SHIPMENT: NOVEMBER 97
 *****6/25/97 UPDATE***
 PRICE ADJUSTMENT.
 On 20

TOTAL ORDER AMOUNT 217,800.00

*Germany
Bayer
Jan 98



REMIT TO:
 BAYER CORPORATION
 P.O. BOX 75662
 CHARLOTTE, NC 28275-5662

FIBERS ORGANICS AND RUBBER DIV
 100 BAYER ROAD
 PITTSBURGH, PA. 15205

ORDER INVOICE
 BILL TO: 005761-001

NO:3041749

DATE: 12-09-97 CO-21 DIV-10 DP-0012
 SHIP TO: 005761-001

CEDAR CHEMICAL CORP
 P.O. BOX 2749
 W HELENA AR 72390

West Helena Acct. Dept.

CEDAR CHEMICAL CORP
 HWY 242 S
 W HELENA AR 72390

RECEIVED
 DEC 15 1997
 RECEIVED

INVOICE

PLEASE RETURN THE "DUPLICATE INVOICE" COPY WITH
 REMITTANCE TO INSURE PROPER PAYMENT IS APPLIED TO YOUR
 ACCOUNT.

PURCHASE ORDER #:04-087455
 FOB:NEW ORLEANS, LA

ORDER INVOICE NO: 3041749 DATE: 12-09-97
 FREIGHT: COLLECT DATE SHIPPED: 12-02-97

ITEM	CODES	DESCRIPTION	QUANTITY	UNIT PRICE	AMOUNT
01	N826	3,4-DICHLOROANILINE, PURE	41,579.00	1.84	76,505.36
080081	06Y63637				
		BULK CONT:SNIU121307 GW: 50,000 TW: 8,421 NW: 41,579 (LBS)			
		ASSAY:100.00			

SEND A CERTIFICATE OF DELIVERY OF IMPORTED MERCHANDISE TO THE
 ATTENTION OF MR BOB CHRISTIAN; CEDAR CHEMICAL CORP; PO BOX
 2749; WEST HELENA, AR 72390. SPECIAL PRICING APPLIES

ENTERED
 DEC 22 1997
 WEST HELENA

VENDOR #		INVOICE #	
2987		3041749	
P.O. #	REC. RPT. #	INV. CD	INV. DATE
87455		1	120997
TERMS CODE	DUE DATE	FRY. BILL CD	SALES ORDER #
3			
INVOICE AMT.	DISC. ALLOWED		
76,505.36			
CL NUMBER	AMOUNT	WORK ORDER #	
C153 SAID	76,505.36	897	
DONE BY	DATE	APPROVED BY	ENTERED BY
RK	12-21-97	[Signature]	[Signature]

 76,505.36
 LAST PAGE
 ACTION **0017
 IN YOUR PURCHASE ORDER, YOUR ORDER IS ACCEPTED
 ON SUCH CONTRACT EXISTS. YOUR ORDER IS ACCEPTED
 TERMS AND CONDITIONS PRINTED ON THE REVERSE SIDE

Corporation, Pittsburgh, PA 15205-8741

RAW MATERIAL RECEIVING RECORD

NO 10848

CEDAR CHEMICAL 9000-1 REV: C

TIME IN AT GATE

0330

RECEIVED BY

KC

SECTION 1

12-2-97	04-087455	SNIA 21307-3	Net 41688	
SHIPPER SAGER CHEMICAL		CARRIER E		
QUANTITY 1	CONTAINER 50A CONTAINER	DESTINATION UNIT 6	RAW MAT CODE # 3020	DESCRIPTION DCA

COMMENTS

P.O.A IN LAB

SECTION 2

RECIPIENT Lynch Valley	TIME SAMPLE CERTIFICATE TAKEN TO LAB 0420
UNLOADED AT (tank number, unit, warehouse, etc.) Unit 6 T6210 17 T6211	

COMMENTS

SECTION 3

C	✓		
COMMENTS COI 592 H. 0-01			

SECTION 4

L. Alford	✓		
PLANT WEIGHT	UNLOADING TIMES		
NET	START TIME	END TIME	

COMMENTS



West Helena Acct. Dept.

RECEIVED
DEC 19 1997
RECEIVED

RENIT TO:
BAYER CORPORATION
P.O. BOX 75662
CHARLOTTE, NC 28275-8662

FIBERS ORGANICS AND RUBBER DIV
100 BAYER ROAD
PITTSBURGH, PA. 15205

ORDER INVOICE
BILL TO: 005761-001

NO: 3041751

DATE: 12-12-97 CO-21 DIV-10 DP-0012
SHIP TO: 005761-001

CEDAR CHEMICAL CORP
P.O. BOX 2749
W HELENA AR 72390

CEDAR CHEMICAL CORP
HWY 242 S
W HELENA AR 72390

INVOICE

PLEASE RETURN THE "DUPLICATE INVOICE" COPY WITH
REMITTANCE TO INSURE PROPER PAYMENT IS APPLIED TO YOUR
ACCOUNT.

PURCHASE ORDER #: 04-087455
FOB: NEW ORLEANS, LA

ORDER INVOICE NO: 3041751 DATE: 12-12-97
FREIGHT: COLLECT DATE SHIPPED: 12-02-97

ITEM	CODES	DESCRIPTION	QUANTITY	UNIT PRICE	AMOUNT
01	N826	3,4-DICHLOROANILINE, PURE	45,239.00	1.84	83,239.76

080081 06Y63638
BULK CONT: TIFU117029 GW 50,000 TW: 4,761 NW: 45,239 (SBS)
ASSAY 7100.00

ENTERED
JAN 7 1998
WEST HELENA

SEND A CERTIFICATE OF DELIVERY OF IMPORTED MERCHANDISE TO THE
ATTENTION OF MR BOB CHRISTIAN; CEDAR CHEMICAL CORP, PO BOX
2749, WEST HELENA, AR 72390. SPECIAL PRICING APPLIES

VENDOR #		INVOICE #	
2987		3041751	
P.O. #	REC. RPT. #	INV. CD	INV. DATE
87455		1	12/29/97
TERMS CODE	DUE DATE	FRT BILL CD	SALES ORDER #
2			
INVOICE AMT.		DISC. ALLOWED	
83,239.76			
GL NUMBER	AMOUNT	WORK ORDER #	
C 1535910	83,239.76		
DONE BY	DATE	APPROVED BY	ENTERED BY
AK	12-31-97	[Signature]	[Signature]

E 83,239.76

LAST PAGE
LATION **0229

IF IN YOUR PURCHASE ORDER, YOUR ORDER IS ACCEPTED
NO SUCH CONTRACT EXISTS, YOUR ORDER IS ACCEPTED
TERMS AND CONDITIONS PRINTED ON THE REVERSE SIDE

RAW MATERIAL RECEIVING RECORD

NO 10849

CEDAR CHEMICAL 9000-1 REV: C

TIME IN AT GATE <i>0335</i>	SECTION 1	RECEIVED BY
--------------------------------	-----------	-------------

DATE	ORDER NO.	CAR OR TRUCK NO.	DECLARED WEIGHT
<i>2.2.97</i>	<i>111-047055</i>	<i>TIFC-117029-0</i>	Net <i>52955</i>

SHIPPER <i>Bayer Chemical</i>	CARRIER <i>Trillium E</i>
----------------------------------	------------------------------

QUANTITY	CONTAINER	DESTINATION	RAW MAT CODE #	DESCRIPTION
<i>1</i>	<i>50A CONTAINER</i>	<i>Unit 6</i>	<i>3020</i>	<i>DEA</i>

COMMENTS
COA in unit 6

SECTION 2

RECIPIENT	TIME SAMPLE CERTIFICATE TAKEN TO LAB
<i>Dr. J. Miller</i>	<i>0420</i>

UNLOADED AT (tank number, unit, warehouse, etc.)
Unit 6 T-210 & T6211

COMMENTS

SECTION 3

REASON FOR REJECT	REJECT	REASON FOR REJECT	REJECT
<i>CR</i>	<input checked="" type="checkbox"/>		

COMMENTS
*COA 95.8
11.0.02*

SECTION 4

REASON FOR REJECT	REJECT	REASON FOR REJECT	REJECT
<i>L. AMW</i>	<input checked="" type="checkbox"/>		

PLANT WEIGHT	UNLOADING TIMES	
NET	START TIME	END TIME

COMMENTS



West Helena Acct. Dept.

REMIT TO:
BAYER CORPORATION
P.O. BOX 75662
CHARLOTTE, NC 28275-5662

RECEIVED
JAN 06 1998
RECEIVED

FIBERS ORGANICS AND RUBBER DIV
100 BAYER ROAD
PITTSBURGH, PA. 15205

ORDER INVOICE
BILL TO: 005761-001

NO: 3041753

DATE: 12-31-97 CO-21 DIV-10 DP-0012
SHIP TO: 005761-001

CEDAR CHEMICAL CORP
P.O. BOX 2749
W HELENA AR 72390

12-24-97
10976

CEDAR CHEMICAL CORP
HWY 242 S
W HELENA AR 72390

INVOICE

PLEASE RETURN THE "DUPLICATE INVOICE" COPY WITH
REMITTANCE TO INSURE PROPER PAYMENT IS APPLIED TO YOUR
ACCOUNT.

PURCHASE ORDER #: 04-087455
FOB: NEW ORLEANS, LA

ORDER INVOICE NO: 3041753 DATE: 12-31-97
FREIGHT: COLLECT DATE SHIPPED: 12-26-97

ITEM	CODES	DESCRIPTION	QUANTITY	UNIT PRICE	AMOUNT
01	N826	3,4-DICHLOROANILINE, PURE	42,020.00	1.84	77,316.80

080081 06Y63640
BULK CONT: SNIU121076 GW: 45,000 TW: 2,980 NW: 42,020 (LBS)
ASSAY%100.00

ENTERED

SEND A CERTIFICATE OF DELIVERY OF IMPORTED MERCHANDISE TO THE
ATTENTION OF MR BOB CHRISTIAN; CEDAR CHEMICAL CORP; PO BOX
2749; WEST HELENA, AR 72390. SPECIAL PRICING APPLIES

JAN 30 1998

VENDOR #		INVOICE #	
2987		3041753	
P.O. #	REC RPT #	INV CD	INV. DATE
87455		1	123197
TERMS CODE	DUE DATE	FRT BILL CD	SALES ORDER #
3			
INVOICE AMT	DISC ALLOWED		
77,316.80			
GL NUMBER	AMOUNT	WORK ORDER #	
C153 5910	77,316.80		
DONE BY		DATE	APPROVED BY
DV		1 27 98	
		ENTERED BY	

77,316.80

LAST PAGE
ATION **0031

ED IN YOUR PURCHASE ORDER. YOUR ORDER IS ACCEPTED
NO SUCH CONTRACT EXISTS. YOUR ORDER IS ACCEPTED
TERMS AND CONDITIONS PRINTED ON THE REVERSE SIDE



West Helena Acct. Dept

REMIT TO:
BAYER CORPORATION
P.O. BOX 75662
CHARLOTTE, NC 28275-5662

RECEIVED
JAN 06 1998
RECEIVED

FIBERS ORGANICS AND RUBBER DIV
100 BAYER ROAD
PITTSBURGH, PA. 15205

ORDER INVOICE
BILL TO: 005761-001

NO: 3041752

DATE: 12-29-97 CO-21 DIV-10 DP-0012
SHIP TO: 005761-001

CEDAR CHEMICAL CORP
P.O. BOX 2749
W HELENA AR 72390

12-19-97
10952

CEDAR CHEMICAL CORP
HWY 242 S
W HELENA AR 72390

INVOICE

PLEASE RETURN THE "DUPLICATE INVOICE" COPY WITH
REMITTANCE TO INSURE PROPER PAYMENT IS APPLIED TO YOUR
ACCOUNT

PURCHASE ORDER #: 04-087455
FOB: NEW ORLEANS, LA

ORDER INVOICE NO: 3041752 DATE: 12-29-97
FREIGHT: COLLECT DATE SHIPPED: 12-18-97

ITEM	CODES	DESCRIPTION	QUANTITY	UNIT PRICE	AMOUNT
01	N826	3,4-DICHLOROANILINE, PURE	43,916.00	1.84	80,805.44

080081 06Y63639
BULK CONT: SNIU121118 GW: 50,000 TW: 6,084 NW: 43,916 (LBS) ENTERED
ASSAY: 100.00

SEND A CERTIFICATE OF DELIVERY OF IMPORTED MERCHANDISE TO THE
ATTENTION OF MR BOB CHRISTIAN; CEDAR CHEMICAL CORP; PO BOX
2749; WEST HELENA, AR 72390. SPECIAL PRICING APPLIES

JAN 30 1998

WEST HELENA

VENDOR #		INVOICE #	
2987		3041752	
P.O. #	REC RPT. #	INV. CD	INV DATE
87455		1	122997
TERMS CODE	DUE DATE	FRT BILL CD	SALES ORDER #
3			
INVOICE AMT		DISC ALLOWED	
80,805.44			
GL NUMBER	AMOUNT	WORK ORDER #	
01538910	80,805.44		
DONE BY		DATE	APPROVED BY
DY		1-29-98	

E 80,805.44

LAST PAGE
ATION **0049

IF IN YOUR PURCHASE ORDER YOUR ORDER IS ACCEPTED
NO SUCH CONTRACT EXISTS YOUR ORDER IS ACCEPTED
TERMS AND CONDITIONS PRINTED ON THE REVERSE SIDE

RAW MATERIAL RECEIVING RECORD

NO 10952

CEDAR CHEMICAL 9000-1 REV: C

TIME IN AT GATE
12:40

RECEIVED BY
M. Oliver

SECTION 1

DATE: 12-19-97 CONTAINER NO: 04087455 CASE OR TANK NO: SN 111211189-~~111~~ Net 43916

SHIPPER: *Bayer* CARRIER: *Hiple E*

QUANTITY	CONTAINER	DESTINATION	RAW MAT CODE #	DESCRIPTION
1	S/C	unit #6	3020	DCA

COMMENTS
Lab Mat C.O.A.

SECTION 2

RECIPIENT: *E. P. ...* TIME SAMPLE CERTIFICATE TAKEN TO: *12:50*

UNLOADED AT (tank number, unit, warehouse, etc.):
T-200-11

COMMENTS

SECTION 3

C m *✓*

COMMENTS
COA 99.9
H.O. .04

SECTION 4

L. Allw *✓*

PLANT WEIGHT UNLOADING TIMES
NET START TIME END TIME

COMMENTS
Dropped Sea Containers @ Unit



REMIT TO:

BAYER CORPORATION
P.O. BOX 75662
CHARLOTTE, NC 28275-5662

FIBERS ORGANICS AND RUBBER DIV
100 BAYER ROAD
PITTSBURGH, PA. 15205

ORDER INVOICE
BILL TO: 005761-001

NO: 3041754

DATE: 01-02-98 CO-21 DIV-10 DP-0012
SHIP TO: 005761-001

CEDAR CHEMICAL CORP
P.O. BOX 2749
W HELENA AR 72390

12-24-97
10975

CEDAR CHEMICAL CORP
HWY 242 S
W HELENA AR 72390
West Helena Acct. Dept.

RECEIVED
JAN 12 1998
RECEIVED

INVOICE

PLEASE RETURN THE "DUPLICATE INVOICE" COPY WITH
REMITTANCE TO INSURE PROPER PAYMENT IS APPLIED TO YOUR
ACCOUNT

PURCHASE ORDER #: 04-087455
FOB: NEW ORLEANS, LA

ORDER INVOICE NO: 3041754 DATE: 01-02-98
FREIGHT: COLLECT DATE SHIPPED: 12-28-97

ITEM	CODES	DESCRIPTION	QUANTITY	UNIT PRICE	AMOUNT
01	N826	3,4-DICHLOROANILINE, PURE	44,092.00	1.84	81,129.28

080081 06Y63641
BULK CONT: SNIU121281 GW: 50,000 TW: 5,908 NW: 44,092 (LBS)
ASSAY%100.00

SEND A CERTIFICATE OF DELIVERY OF IMPORTED MERCHANDISE TO THE
ATTENTION OF MR BOB CHRISTIAN; CEDAR CHEMICAL CORP; PO BOX
2749; WEST HELENA, AR 72390. SPECIAL PRICING APPLIES

VENDOR #		INVOICE #	
2987		3041754	
PO #	REC RPT. #	INV. CD	INV. DATE
87455		1	010298
TERMS CODE	DUE DATE	FRT. BILL CD	SALES ORDER #
3			
INVOICE AMT.		DISC ALLOWED	
81,129.28			
GL NUMBER	AMOUNT	WORK ORDER #	
0158 5910	81,129.28		

81,129.28

JAN 30 1998

LAST PAGE
TION **0022

IN YOUR PURCHASE ORDER YOUR ORDER IS ACCEPTED
SUCH CONTRACT EXISTS. YOUR ORDER IS ACCEPTED
TERMS AND CONDITIONS PRINTED ON THE REVERSE SIDE

AB0000079449

RAW MATERIAL RECEIVING RECORD

No 10975

CEDAR CHEMICAL 9000-1 REV: C

TIME IN AT GATE
11:30

RECEIVED BY
M. Sullivan

SECTION 1

DATE	ORDER NO.	CAR OR TRUCK NO.	DECLARED WEIGHT
12-24-97	n/a	SN1U121281-6	Net n/a 44092

SHIPPER	CARRIER
<i>Bayer</i>	<i>Triple E</i>

QUANTITY	CONTAINER	DESTINATION	RAW MAT CODE #	DESCRIPTION
1	S/C	unit #2	3020	DCA

COMMENTS
Lab Has C.O.A.

SECTION 2

RECIPIENT	TIME SAMPLE/CERTIFICATE TAKEN TO LAB
<i>J.K. Sulch</i>	

UNLOADED AT (tank number, unit, warehouse, etc.)
Unit #2

COMMENTS
Spotted at 2:10 - 2:15

SECTION 3

LAB TECHNICIAN	ACCEPT	REJECT	REASON FOR REJECTION
<i>JH</i>	<input checked="" type="checkbox"/>		

COMMENTS
% DCA 99.9 H₂O 100 ppm

SECTION 4

SHIFT SUPERVISOR	ACCEPT	REJECT	REASON FOR REJECTION
<i>McBeide</i>	<input checked="" type="checkbox"/>		

PLANT WEIGHT	UNLOADING TIMES	
NET	START TIME	END TIME
	12:10	

COMMENTS
Spotted S/C At Unit



REMIT TO:

BAYER CORPORATION
P.O. BOX 75662
CHARLOTTE, NC 28275-5662

FIBERS ORGANICS AND RUBBER DIV
100 BAYER ROAD
PITTSBURGH, PA. 15205

ORDER INVOICE
BILL TO: 005761-001

NO:3041762

DATE: 01-02-98 CD-21 DIV-10 DP-0012
SHIP TO: 005761-001

CEDAR CHEMICAL CORP
P.O. BOX 2749
W HELENA AR 72390

CEDAR CHEMICAL CORP
HWY 242 S
W HELENA AR 72390

12-30-97
11002

INVOICE

PLEASE RETURN THE "DUPLICATE INVOICE" COPY WITH
REMITTANCE TO INSURE PROPER PAYMENT IS APPLIED TO YOUR
ACCOUNT

PURCHASE ORDER #:04-087455
FOB:NEW ORLEANS, LA

ORDER INVOICE NO: 3041762 DATE: 01-02-98
FREIGHT: COLLECT DATE SHIPPED: 12-30-97

ITEM	CODES	DESCRIPTION	QUANTITY	UNIT PRICE	AMOUNT
01	N826	3,4-DICHLOROANILINE, PURE	42,461.00	1.84	78,128.24

080081 06Y63644

BULK CONT:SNIU121073 GW: 50,000 TW: 7,539 NW: 42,461 (LBS)
ASSAY:100.00

ENTERED

JAN 30 1998

SEND A CERTIFICATE OF DELIVERY OF IMPORTED MERCHANDISE TO THE
ATTENTION OF MR BOB CHRISTIAN; CEDAR CHEMICAL CORP; PO BOX
2749; WEST HELENA, AR 72390. SPECIAL PRICING APPLIES

WEST HELENA

VENDOR #		INVOICE #	
2987		3041762	
P.O. #	REC. RPT. #	INV. CD	INV. DATE
87455		1	010298
TERMS CODE	DUE DATE	FRT BILL CD	SALES ORDER #
3			
INVOICE AMT.	DISC ALLOWED		
78,128.24			
GL NUMBER	AMOUNT	WORK ORDER #	
01535910	78,128.24		
DATE		APPROVED BY	ENTERED BY
1-28-98		GTW	

78,128.24

LAST PAGE
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**0024

IN YOUR PURCHASE ORDER YOUR ORDER IS ACCEPTED
IF SUCH CONTRACT EXISTS YOUR ORDER IS ACCEPTED
RMS AND CONDITIONS PRINTED ON THE REVERSE SIDE

RAW MATERIAL RECEIVING RECORD

No 11002

CEDAR CHEMICAL 9000-1 REV: C

TIME IN AT GATE 3:10	RECEIVED BY KC
-------------------------	-------------------

SECTION 1

DATE	ORDER NO	TRUCK NO	WEIGHT
10/7	NA	SNTA 21073-1	Net NA 42401

SHIPPER SNTA	CARRIER Triple E
-----------------	---------------------

QUANTITY	CONTAINER	DESTINATION	RAW MAT CODE #	DESCRIPTION
1	SEA CONTAINER	UNIT 6	NA	DC 17

COMMENTS

SECTION 2

RECIPIENT	TIME SAMPLE/CERTIFICATE TAKEN TO LAB

UNLOADED AT (tank number, unit, warehouse, etc.)

COMMENTS

SECTION 3

LAB TECHNICIAN	AGREED	TEST	REASON FOR REJECTION
TLP	X		

COMMENTS

SECTION 4

PLANT SUPERVISOR	AGREED	REASON FOR REJECTION
L. Allen	✓	

PLANT WEIGHT NET	UNLOADING TIMES	
	START TIME	END TIME

COMMENTS
Dropped SEA container @ UNIT



REMIT TO:

BAYER CORPORATION
P.O. BOX 75662
CHARLOTTE, NC 28275-5662

FIBERS ORGANICS AND RUBBER DIV
100 BAYER ROAD
PITTSBURGH, PA. 15205

ORDER INVOICE
BILL TO: 005761-001

NO: 3041759

DATE: 01-02-98 CO-21 DIV-10 DP-0012
SHIP TO: 005761-001

CEDAR CHEMICAL CORP
P.O. BOX 2749
W HELENA AR 72390

CEDAR CHEMICAL CORP
HWY 242 S
W HELENA AR 72390

12-30-97
11002

INVOICE

PLEASE RETURN THE "DUPLICATE INVOICE" COPY WITH
REMITTANCE TO INSURE PROPER PAYMENT IS APPLIED TO YOUR
ACCOUNT

PURCHASE ORDER #: 04-087455
FOB: NEW ORLEANS, LA

ORDER INVOICE NO: 3041759 DATE: 01-02-98
FREIGHT: COLLECT DATE SHIPPED: 12-30-97

ITEM	CODES	DESCRIPTION	QUANTITY	UNIT PRICE	AMOUNT
01	N826	3,4-DICHLOROANILINE, PURE	43,387.00	1.84	79,832.08

080081 06Y63643
BULK CONT: SNIU121108 GW: 50,000 TW: 6,613 NW: 43,387 (LBS)
ASSAY: 100.00

SEND A CERTIFICATE OF DELIVERY OF IMPORTED MERCHANDISE TO THE
ATTENTION OF MR BOB CHRISTIAN; CEDAR CHEMICAL CORP; PO BOX
2749; WEST HELENA, AR 72390. SPECIAL PRICING APPLIES

ENTERED
JAN 30 1998
WEST HELENA

VENDOR #		INVOICE #	
2987		3041759	
P.O. #	REC RPT. #	INV CD	INV DATE
87455		1	010298
TERMS CODE	DUE DATE	FRT BILL CD	SALES ORDER #
2			
INVOICE AMT		DISC ALLOWED	
79,832.08			
GL NUMBER	AMOUNT	WORK ORDER #	
C 153 5910	79,832.08		
DONE BY	DATE	APPROVED BY	ENTERED BY
JV	1-29-98	AMN	

79,832.08

LAST PAGE
TION

**0023

IN YOUR PURCHASE ORDER YOUR ORDER IS ACCEPTED
SUCH CONTRACT EXISTS YOUR ORDER IS ACCEPTED
RMS AND CONDITIONS PRINTED ON THE REVERSE SIDE

RAW MATERIAL RECEIVING RECORD

NO 11073

CEDAR CHEMICAL 9000-1 REV: C

TIME IN AT GATE
2:30

RECEIVED BY
K.L.

SECTION 1

DATE	ORDER NO.	CAR OR TRUCK NO.	Net
2-3-77	NA	SATU 2104-6	NA 43387

SHIPPER	CARRIER
JAY	TRIPLE E

QUANTITY	CONTAINER	DESTINATION	RAW MAT CODE #	DESCRIPTION
1	SEA CONTAINER	UNIT 6	NA	DCA

COMMENTS
COA IN LAB

SECTION 2

RECIPIENT	TIME SAMPLE / CERTIFICATE TAKEN TO

UNLOADED AT (tank number, unit, warehouse, etc.)

COMMENTS

SECTION 3

LAB TECHNICIAN	ACCEPT	REJECT	REASON FOR REJECT
TGP	X		

COMMENTS

SECTION 4

LAB SUPERVISOR	ACCEPT	REJECT	REASON FOR REJECT
L.A.M.	✓		

PLANT WEIGHT	UNLOADING TIMES	
	START TIME	END TIME
NET		

COMMENTS
D.20 sea container @ unit

5102-1590

FMC

FMC Corporation
1735 Market Street
Philadelphia PA 19103
United States of America

**Change to
Purchase order**

PO number/Date
44023114

03/11/1998
RECEIVED**AUG 28 1998**

Contact Person/Telephone.....
Baltimore Raw Mat/410.355-6400

Vendor Number :10025721
CEDAR CHEMICAL CORP.
49 PHILLIPS RD.
WEST HELENA, AR 72390

Delivery:

Payment Terms: Within 30 days Due net
Preferred Carrier : N/A

Bill To :

FMC Corporation
Baltimore Accounts Payable
PO Box 1616
Baltimore, MD 21203
Tel: (410) 355-6400

PURCHASING CONTACT: SUZANNE WILLIAMS, EXT. 2518
PLANT CONTACT: ELAINE CURTIS, EXT. 2563

Item	Material Number	Unit	Description	Price per unit	Net value
	Order Qty.				
00030	451,500	Dollar	Cedar Scope change & other reimbursement	1.00	451,500.00

Delivery date 08/31/1998

This supplement to purchase order 44023114 is issued to reimburse Cedar Chemical for an amount not to exceed \$451,500.

Specific text for this purchase order and any related invoices should read as follows:

"Capital fee to cover the full amount FMC agreed to reimburse Cedar for previously agreed upon process scope changes and certain other costs in installing equipment to toll 5-nitro for FMC".

HARD COPY OF CHANGE TO PURCHASE ORDER MAILED TO
GEOFFREY PRATT 08-24-98.

STANDARD P.O. TERMS AND CONDITIONS

Modified 7/29/98

PRICE:

1 This is a firm price order, in the absence of indication of price by Buyer, Seller must not fill this order at a price higher than last quoted or charged to Buyer without Buyer's written consent. Seller represents that the prices charged for the items or services covered by this order comply with applicable government regulations in effect at time of order placement, sale or delivery.

TERMS OF PAYMENT

2 Net 45 Days unless appropriate discount is negotiated.

ATTACHMENTS

3 Documents designated by Buyer as including supplemental terms and conditions, if any, are incorporated by reference the same as if set out in full herein.

CHANGES

4 The Buyer reserves the right at any time to change by written notification any of the following: (a) Specifications, drawings and data incorporated in this Purchase Order where the items to be furnished are to be specifically manufactured for the Buyer, (b) quantity, (c) methods of shipment or packaging, (d) place of delivery, (e) time of delivery, (f) any other matters affecting this order.

5 If any change by Buyer causes an increase or decrease in the cost or of the delivery schedule for the Purchase Order, Buyer shall make in writing an equitable adjustment in the contract price, delivery schedule, or both. Any claim by Seller for adjustment under this clause shall be deemed waived unless asserted in writing within ten (10) days from Seller's receipt of the change.

TERMINATION

6 Buyer may terminate this Purchase Order for its convenience, in whole or in part, at any time on written or telegraphic notice to Seller. Upon receipt of such termination, Seller shall promptly comply with the directions contained in such notice and shall, as required, (a) take action necessary to terminate the work as provided in the notice, minimizing costs and liabilities for the terminated work, (b) protect, preserve and deliver in accordance with Buyer's instructions any property related to the order in Seller's possession and (c) commence the performance of any part of the work not terminated by Buyer.

7 Buyer may also, by written or telegraphic notice to Seller terminate the whole or any part of this order for default (a) if Seller fails to deliver items and material or perform the services required on schedule or (b) if, in any case, reasonable grounds for insecurity arise as to Seller's expected performance (including timely performance) within ten (10) days after Buyer's written demand for adequate assurance. Buyer may also terminate for default if Seller becomes insolvent or makes an assignment for the benefit of creditors or commits an act of bankruptcy or files or has filed against it a petition in bankruptcy or reorganization proceedings.

8 If Buyer terminates all or part of this order for default under Paragraph 7, Buyer may procure upon terms and in a manner it deems appropriate goods and services similar to those terminated. In addition, Buyer may require Seller to deliver any completed or uncompleted goods related to this Purchase Order by agreeing to pay Seller as specified in paragraph 9 below.

9. On termination for Buyer's convenience, Seller at the time of termination, may have in stock or on firm order completed or uncompleted items or raw, semi-processed or completed materials for use in fulfilling this Purchase Order. (A) For completed items or materials, Buyer shall either require delivery of all or part of the completed goods and make payment at the order price, or (without taking delivery) pay Seller the difference, if any, between the order price and the market price (if lower) at the time of termination. (B) For uncompleted items or raw or semi-processed materials, Buyer shall either require Seller to deliver all or part of such goods at the position of the order price representing the stage of completion, or (without taking delivery) pay Seller for such goods which are properly allocable to this order a portion of the order price representing the stage of completion, reduced by the higher of the market or scrap value of the goods at that stage of completion. (C) For goods which Seller has on firm order, Buyer may, in its option, either take an assignment of Seller's rights under the order or pay the cost, if any, of sending or discharging Seller's obligation under the order. If Buyer terminates for default, Seller shall be liable for additional costs, if any, for the purchase of such similar goods and services to cover such default. Payments to Seller hereunder shall be the sole remedy available to Seller in the event of a termination by Buyer.

10 Buyer's rights and remedies under paragraphs 6-9 inclusive shall not be exclusive and are in addition to any other rights and remedies provided by law or under this Purchase Order.

ASSIGNMENT AND DELEGATION

11 Seller may not delegate, assign, transfer or subcontract this order or any right or obligation hereunder without Buyer's prior written consent. Any purported delegation, assignment, transfer or subcontract shall be void and ineffective and grounds for Buyer's termination of this Purchase Order.

DELIVERY

12 Time is of the essence in the performance of this Purchase Order. Seller shall furnish sufficient labor and management forces, plant, and equipment and shall work such hours (including night shift, overtime, weekend and holiday work) as may be required to assure timely delivery.

13 Regardless of delivery or performance in installments, Seller's obligation is not severable. Buyer need not accept shipment from C.O.D. without its consent and may return them at Seller's risk.

UNUSABLE DELAY

14 Fires, floods, strikes, lockouts, epidemics, accidents, shortages or other causes beyond the reasonable control of the parties, which prevent Seller from delivering, or Buyer from receiving any of the goods and services covered by this Purchase Order shall suspend deliveries until the cause is removed, subject, however, to Buyer's right of cancellation under Paragraph 6.

TAXES

15 If the goods furnished under this Purchase Order are for resale (as indicated on the front), Buyer will pay any sales or use taxes imposed on such goods, after delivery. Seller will pay all other taxes imposed before delivery to the destination point, including property taxes imposed on goods for which title has passed to Buyer.

APPLICABLE LAWS

16 Seller warrants and agrees that it has complied and will comply with all applicable Federal, State and local laws, codes and regulations, including, without limitation, the following: the Fair Labor Standards Act of 1938, as amended.

SENTENTS

17 Seller shall, at its expense, defend any action, claim or demand, whether grounded or otherwise, made against Buyer, its successors and assigns, based on any claim that any goods or any component part delivered or furnished hereunder infringes any U.S. or foreign letters patent, trademark or other right held by third parties except infringement necessarily resulting from adherence to specifications furnished by Buyer. Buyer agrees to notify Seller in writing of any such claim and to provide such assistance, at Seller's expense, as may be reasonably required, in defending the action, claim or demand. Seller shall pay all damages, costs and attorney fees awarded or incurred in any such action, claim or demand.

18 If the goods or any component part furnished hereunder are held to infringe and their use is enjoined, Seller shall, at its option and its own expense (a) procure for Buyer and its successors and assigns the right to continue using the goods, (b) replace such goods with a substantially equivalent non-

infringing product acceptable to Buyer, or (c) modify such goods so they become non-infringing with substantially equivalent performance acceptable to Buyer. Absent (a), (b), (c), Buyer reserves its right to sue, and at its option may return the infringing goods to Seller at Seller's expense and Seller promptly shall refund the purchase price to Buyer.

PACKAGING, PACKING LIST AND BILL OF LADING

19 Seller shall be responsible for proper packaging, loading and tie-down to prevent damage during transportation. Seller must bill all reasonable containers on a separate memo invoice, return transportation charges will be collect and for Seller's account. Buyer's weight and/or count will be accepted as final and conclusive on all shipments not accompanied by such packing list.

INSPECTION

20 All goods furnished hereunder will be subject to Buyer's final inspection and approval within a reasonable time after delivery irrespective of payment date. Buyer may reject goods not in accordance with the instructions, specifications, drawings, data or Seller's express or implied warranties ("Nonconforming Goods") or may accept some and reject other Nonconforming Goods, at its option. All rejected goods shall be held at Seller's risk. Buyer may return rejected goods to Seller at Seller's risk and expense and Buyer shall have no further obligation for such goods. Payment for any goods shall not be deemed acceptance and in no event shall Buyer incur any liability for payment for rejected goods.

21 Buyer shall have a reasonable time (not less than ten (10) days from receipt) to submit claims of count, weight, quantity, loss or damage to delivered goods. Buyer will calculate damages on claims and deduct the amount from Seller's invoice. If invoice was previously paid, Seller will reimburse the amount of damages to Buyer.

22 Seller shall assume responsibility for and will pay any and all loss, cost, damage or expense, including attorney fees, and cost of replacement incurred by Buyer attributed to Buyer's rejection of Nonconforming Goods, or to Seller's untimely delivery.

INDEMNITY

23 The Seller agrees to defend, indemnify and save the Buyer harmless against all liabilities, claims or demands whether in tort, in contract or otherwise for injuries or damages to any person or property arising out of Seller's act or omissions in the performance of this Purchase Order, including, without limitation, a breach of Seller's warranties contained in paragraph 24.

SELLER WARRANTIES

24 By accepting this Purchase Order, Seller warrants that the goods and services furnished will be free from contaminants, defects in material, design and workmanship, new, merchantable and in full conformity with Buyer's specifications, drawings and data, and Seller's descriptions, promises or samples, and that such goods will be fit for the Buyer's intended use, provided Seller has reason to know such use, and that Seller will convey good title to the goods free and clear from all liens, claims and encumbrances. Seller warrants that it shall be able to fulfill all of its obligations under this agreement with no degradation in performance due to the calendar change from 1999 to 2000 and beyond January 1, 2000. These warranties shall survive acceptance of the goods delivered hereunder, and are in addition to any warranties of additional scope given to Buyer by Seller. No implied warranties by the Seller are excluded. All warranties run to both Buyer and its customers.

25 Seller, without cost to Buyer, shall promptly do all things necessary to correct any breach of the above warranties in a manner satisfactory to Buyer. If Seller is unable or refuses to repair or replace as Buyer may require, Buyer may (a) contract or otherwise repair, or replace such defective goods and back-charge Seller for the excess cost.

TITLE AND RISK OF LOSS

26 Notwithstanding any other term of this Purchase Order to the contrary, risk of loss of all goods shall remain in Seller until receipt and acceptance of the goods at Buyer's location. Notwithstanding restrictive legends to the contrary title to plans, drawings and specifications for goods shall be vested and remain with Buyer and may be used by Buyer for any purpose.

27 Notwithstanding any other term of this Purchase Order to the contrary, title shall pass to Buyer upon Buyer's acceptance of goods at Buyer's location. If Buyer makes progress payments, title in the goods shall be transferred to Buyer as payments are made, and in the same proportion as the cumulative payments bear to the order price. Seller shall also identify such goods as the property of Buyer, unless Buyer waives identification in writing.

NONDISCLOSURES

28 If Buyer discloses or grants Seller access to any research, development, technical, economic or other business information or "know-how" of a confidential nature, whether reduced to writing or not, Seller agrees, as a condition of receiving such information or "know-how", that it will not use or disclose any such information to any other person at any time, except as may be necessary in the performance of this order, without Buyer's prior written consent. Seller will use such information only to perform this Purchase Order and it will only disclose such information to those of its officers, directors and responsible employees to whom it will be essential to make such disclosure in order to accomplish the purpose of this Purchase Order.

PROPERTY FURNISHED TO SELLER BY BUYER

29 All special dies, molds, patterns, jigs, fixtures, and any other property which Buyer furnished to Seller or specifically pays for to be used in the performance of this Purchase Order, shall be and remain Buyer's property, shall be subject to removal upon Buyer's unaction, shall be for Buyer's exclusive use, shall be held at Seller's risk, and shall be kept insured by Seller at Seller's expense while in its custody or control in an amount equal to the replacement cost, with loss payable to Buyer. Seller will furnish copies of policies or certificates of insurance on Buyer's demand.

RESOLUTION OF CONFLICTS OR INCONSISTENCIES OCCURRING IN THE ORDER

30 It is Seller's responsibility to comply with this Purchase Order and all referenced documents and to clarify with Buyer any inconsistencies or conflicts in any part of this Purchase Order, such as the provisions contained in this document, additional terms and conditions, general specifications, detailed specifications, etc. Should Seller fail to contact Buyer to resolve any such conflicts or inconsistencies, Seller will be solely responsible for errors resulting from conflicts or inconsistencies. Where documents are referenced, the version in effect at the time of order placement shall apply.

31 Acknowledgment of this order, shipment of any goods or rendering of any services pursuant to this order shall be deemed an acceptance of these terms and conditions. No modification or revision or of release from this Purchase Order shall be binding unless agreed to in a writing signed by both Buyer and Seller and specifically labeled as a modification or release. These terms and conditions supersede any submitted by Seller in any acceptance, proposal or acknowledgment and Buyer hereby objects to any additional terms contained in such acceptance, proposal or acknowledgment.

WAIVER

32 Buyer's failure to insist on Seller's strict performance of any of the terms and conditions of this Purchase Order at any time shall not be construed as a waiver by Buyer for Seller's performance in the future.

11 b6, b7E/Inform/Std, pu

**Change to
Purchase order**

PO number/Date

44023114

03/11/1998

FMCFMC Corporation
1735 Market Street
Philadelphia PA 19103
United States of AmericaVendor Number :10025721
CEDAR CHEMICAL CORP.
49 PHILLIPS RD.
WEST HELENA, AR 72390

Item	Material Number Order Qty.	Unit	Description	Price per unit	Net value
Please deliver to: CEDAR CHEMICAL CORP. 49 PHILLIPS RD. WEST HELENA, AR 72390					
*** New item ***					
Total net value of all items excl. tax USD					1,521,500.00

THIS PURCHASE ORDER IS ISSUED SUBJECT TO THE TERMS AND
CONDITIONS OF THE TOLL MANUFACTURING AGREEMENT BETWEEN
FMC CORPORATION AND CEDAR CHEMICAL CORPORATION DATED
NOVEMBER 26, 1997.

CONFIRMING - DO NOT DUPLICATE

REQ #40014972/E. CURTIS

IMPORTANT

All shipping papers, invoices and bills of lading must show the Document Number quoted above. All shipments, containers, etc. must be identified with this document number. Ship direct to Consignee at destination.

TERMS AND CONDITIONS:

Acceptance of this order must be at, and limited to, the exact terms and conditions, available from FMC on request, and may not include additional or different terms of conditions.

This order incorporates by reference the equal employment opportunity clause pursuant to the Executive Order 11246, as amended, and the affirmative action clauses pursuant to Section 402 of the Vietnam Era Veterans Readjustment Assistance Act of 1974, as amended, and Section 503 of the Rehabilitation Act of 1973, as amended.

STANDARD P.O. TERMS AND CONDITIONS

Modified 7/29/98

DEFINITIONS

1. This is a firm price order, in the absence of indication of price by Buyer. Seller must not fill this order at a price higher than last quoted or charged to Buyer without Buyer's written consent. Seller represents that the prices charged for the items or service covered by this order comply with applicable government regulations in effect at time of order placement, sale or delivery.

TERMS OF PAYMENT

2. Net 45 Days unless appropriate discount is negotiated.

ATTACHMENTS

3. Documents designated by Buyer as including supplemental terms and conditions, if any, are incorporated by reference the same as if set out in full herein.

CHANGES

4. The Buyer reserves the right at any time to change by written notification any of the following: (a) Specifications, drawings and data incorporated in this Purchase Order where the items to be furnished are to be specifically manufactured for the Buyer; (b) quantity; (c) methods of shipment or packaging; (d) place of delivery; (e) time of delivery; (f) any other matters affecting this order.

5. If any change by Buyer causes an increase or decrease in the cost or of the delivery schedule for the Purchase Order, Buyer shall make in writing an equitable adjustment in the contract price, delivery schedule or both. Any claim by Seller for adjustment under this clause shall be deemed waived unless asserted in writing within ten (10) days from Seller's receipt of the change.

TERMINATION

6. Buyer may terminate this Purchase Order in its entirety or in whole or in part, at any time on written or telegraphic notice to Seller. Upon receipt of such termination, Seller shall promptly comply with the directions contained in such notice and shall, as required, (a) take action necessary to terminate the work as provided in the notice, minimizing costs and liabilities for the terminated work; (b) protect, preserve and deliver in accordance with Buyer's instructions any property related to the order in Seller's possession and (c) continue the performance of any part of the work not terminated by Buyer.

7. Buyer may also, by written or telegraphic notice to Seller terminate the whole or any part of this order for default (a) if Seller fails to deliver items and material or perform the services required on schedule or (b) if at any time reasonable grounds for insecurity arise as to Seller's expected performance (including timely performance) within ten (10) days after Buyer's written demand for adequate assurance. Buyer may also terminate for default if Seller becomes insolvent or makes an assignment for the benefit of creditors or commences an act of bankruptcy or files or has filed against it a petition in bankruptcy or reorganization proceedings.

8. If Buyer terminates all or part of this order for default under Paragraph 7, Buyer may procure upon terms and in a manner it deems appropriate goods and services similar to those terminated. In addition, Buyer may require Seller to deliver any completed or uncompleted goods related to this Purchase Order by agreeing to pay Seller as specified in paragraph 9 below.

9. On termination for Buyer's convenience, Seller at the time of termination, may have in stock or on firm order completed or uncompleted items or raw, semi-processed or completed materials for use in fulfilling this Purchase Order. (A) For completed items or materials, Buyer shall either require delivery of all or part of the completed goods and make payment at the order price, or (without taking delivery) pay Seller the difference, if any, between the order price and the market price (if lower) at the time of termination. (B) For uncompleted items or raw or semi-processed materials, Buyer shall either require Seller to deliver all or part of such goods at the portion of the order price representing the stage of completion, or (without taking delivery) pay Seller for such goods which are properly allocable to this order a portion of the order price representing the stage of completion reduced by the higher of the market or scrap value of the goods at that stage of completion. (C) For goods which Seller has on firm order, Buyer may, at its option, either take an assignment of Seller's rights under the order or pay the cost, if any, of setting or discharging Seller's obligation under the order. If Buyer terminates for default, Seller shall be liable for additional costs, if any, for the purchase of such similar goods and services to cover such default. Payments to Seller hereunder shall be the sole remedy available to Seller in the event of a termination by Buyer.

10. Buyer's rights and remedies under paragraphs 6-9 inclusive shall not be exclusive and are in addition to any other rights and remedies provided by law or under this Purchase Order.

ASSIGNMENT AND DELEGATION

11. Seller may not delegate, assign, transfer or subcontract this order or any right or obligation hereunder without Buyer's prior written consent. Any purported delegation, assignment, transfer or subcontract shall be void and ineffective and grounds for Buyer's termination of this Purchase Order.

DELIVERY

12. Time is of the essence in the performance of this Purchase Order. Seller shall furnish sufficient labor and management, tools, plant and equipment and shall work such hours (including night shift, overtime, weekend and holiday work) as may be required to assure timely delivery.

13. Regardless of delivery or performance in installments, Seller's obligation is not severable. Buyer need not accept shipments item C (1) without its consent and may return them at Seller's risk.

UNUSABLE DELAY

14. Fires, floods, strikes, lockouts, epidemics, accidents, shortages or other causes beyond the reasonable control of the parties, which prevent Seller from delivering or Buyer from receiving any of the goods and services covered by this Purchase Order shall suspend deliveries until the cause is removed, subject, however, to Buyer's right of cancellation under Paragraph 6.

TAXES

15. If the goods furnished under this Purchase Order are for resale (as indicated on the invoice), Buyer will pay any sales or use taxes imposed on such goods after delivery. Seller will pay all other taxes imposed before delivery in the destination point, including property taxes imposed on goods for which title has passed to Buyer.

APPLICABLE LAWS

16. Seller warrants and agrees that it has complied and will comply with all applicable Federal, State and local laws, codes and regulations, including, without limitation, the following: the Federal Anti-Racketeering Act of 1948, as amended.

PATENTS

17. Seller shall at its expense defend any action, claim or demand, whether grounded or otherwise, made against Buyer, its successors and assigns, based on any claim that any goods or any component part delivered or furnished hereunder infringes any U.S. or foreign letters patent, trademark or other rights held by third parties, except infringement which arises only as a result of adherence to specifications furnished by Buyer. Buyer agrees to notify Seller in writing of any such claim and to provide such assistance as Seller's expense, as may be reasonably required, in defending the action, claim or demand. Seller shall pay all damages, costs and attorney fees awarded or incurred in any such action, claim or demand.

18. If the goods in any component part furnished hereunder are held to infringe and their use is enjoined, Seller shall, at its option and its own expense (a) procure for Buyer and its successors and assigns, the right to continue using the goods; (b) replace such goods with a substantially equivalent unit

infringing product acceptable to Buyer; or (c) modify such goods so they become non-infringing with substantially equivalent performance acceptable to Buyer. Absent (a), (b), (c) Buyer reserves its rights at law, and at its option may return the infringing goods to Seller at Seller's expense and Seller promptly shall refund the purchase price to Buyer.

PACKAGING, PACKING LIST AND BILL OF LADING

19. Seller shall be responsible for proper packaging, loading and tie-down to prevent damage during transportation. Seller must bill all returnable containers on a separate memo invoice, return (transportation charges will be collected) and for Seller's account. Buyer's weight and/or count will be accepted as final and conclusive on all shipments not accompanied by such packing list.

INSPECTION

20. All goods furnished hereunder will be subject to Buyer's final inspection and approval within a reasonable time after delivery irrespective of payment date. Buyer may reject goods not in accordance with the instructions, specifications, drawings, data or Seller's express or implied warranties ("Nonconforming Goods") or may accept some and reject other Nonconforming Goods, at its option. All rejected goods shall be held at Seller's risk. Buyer may return rejected goods to Seller at Seller's risk and expense and Buyer shall have no further obligation for such goods. Payment for any goods shall not be deemed acceptance and in no event shall Buyer incur any liability for payment for rejected goods.

21. Buyer shall have a reasonable time (not less than ten (10) days from receipt) to submit claims of count, weight, quantity, loss or damage to delivered goods. Buyer will calculate damages on claims and deduct the amount from Seller's invoice. If invoice was previously paid, Seller will reimburse the amount of damages to Buyer.

22. Seller shall assume responsibility for and will pay any and all loss, cost, damage or expense, including attorney fees, and cost of replacement incurred by Buyer attributed to Buyer's rejection of Nonconforming Goods or to Seller's untimely delivery.

INDEMNITY

23. The Seller agrees to defend, indemnify and save the Buyer harmless against all liabilities, claims or demands whether in tort, in contract or otherwise for injuries or damages to any person or property arising out of Seller's act or omission in the performance of this Purchase Order, including, without limitation, a breach of Seller's warranties contained in paragraph 24.

SELLER WARRANTIES

24. By accepting this Purchase Order, Seller warrants that the goods and services furnished will be free from contamination, defects in materials, design and workmanship, new, non-hazardous and in full conformity with Buyer's specifications, drawings and data, and Seller's descriptions, promises or samples, and that such goods will be fit for the Buyer's intended use. ~~Seller warrants that the goods will be fit for the Buyer's intended use.~~ Seller warrants that it shall be able to fulfill all of its obligations under this agreement with no degradation in performance due to the calendar change from 1999 to 2000 and beyond January 1, 2000. These warranties shall survive as a condition of the goods delivered hereunder, and are in addition to any warranties of additional scope given to Buyer by Seller. No implied warranties by the Seller are excluded. All warranties run to both Buyer and its customers.

25. Seller, without cost to Buyer, shall promptly do all things necessary to correct any breach of the above warranties in a manner satisfactory to Buyer. If Seller is unable or refuses to repair or replace as Buyer may require, Buyer may contract or otherwise repair, or replace such defective goods and back-charge Seller for the excess cost.

TITLE AND RISK OF LOSS

26. Notwithstanding any other term of this Purchase Order to the contrary, risk of loss of all goods shall remain in Seller until receipt and acceptance of the goods at Buyer's location. Notwithstanding restrictive legends to the contrary, title to plans, drawings and specifications for goods shall be vested and remain with Buyer and may be used by Buyer for any purpose.

27. Notwithstanding any other term of this Purchase Order to the contrary, title shall pass to Buyer upon Buyer's acceptance of goods at Buyer's location. If Buyer makes progress payments, title to the goods shall be transferred to Buyer as payments are made, and in the same proportion as the cumulative payments bear to the order price. Seller shall also identify such goods as the property of Buyer, unless Buyer waives identification in writing.

NONDISCLOSURE

28. If Buyer discloses or grants Seller access to any research, development, technical, economic or other business information or "know-how" of a confidential nature, whether reduced to writing or not, Seller agrees, as a condition of receiving such information or "know-how", that it will not use or disclose any such information to any other person at any time, except as may be necessary for the performance of this order, without Buyer's prior written consent. Seller will use such information only to perform this Purchase Order and it will only disclose such information to those of its officers, directors and responsible employees to whom it will be essential to make such disclosure in order to accomplish the purpose of this Purchase Order.

PROPERTY FURNISHED TO SELLER BY BUYER

29. All special dies, molds, patterns, jigs, fixtures, and any other property which Buyer furnished to Seller or specifically pays for to be used in the performance of this Purchase Order shall be and remain Buyer's property, shall be subject to removal upon Buyer's instruction, shall be for Buyer's exclusive use, shall be held at Seller's risk, and shall be kept insured by Seller at Seller's expense while in its custody or control in an amount equal to the replacement cost, with loss payable to Buyer. Seller will furnish copies of prices in certificates of insurance in Buyer's demand.

RESOLUTION OF CONFLICTS OR INCONSISTENCIES OCCURRING IN THE ORDER

30. It is Seller's responsibility to comply with this Purchase Order and all referenced documents and to clarify with Buyer any inconsistencies of one of them in any part of this Purchase Order, such as the provisions contained in this document, additional terms and conditions, general specifications, detailed specifications, etc. Should Seller fail to contact Buyer to resolve any such conflicts or inconsistencies, Seller will be solely responsible for errors resulting from conflicts or inconsistencies. Where documents are referenced, the version in effect at the time of order placement shall apply.

31. Acknowledgment of this order, shipment of any goods or rendering of any services pursuant to this order shall be deemed an acceptance of these terms and conditions. No modification or revision of or release from this Purchase Order shall be binding unless agreed to in writing signed by both Buyer and Seller and specifically labeled as a modification or release. These terms and conditions supersede any submitted by Seller in any acceptance proposal or acknowledgment and Buyer hereby objects to any additional terms contained in such acceptance proposal or acknowledgment.

WAIVER

32. Buyer's failure to insist on Seller's strict performance of any of the terms and conditions of this Purchase Order at any time shall not be construed as a waiver by Buyer for performance in the future.

AB000083363



5100 Poplar Avenue • Suite 2414 • Memphis, TN 38137 • (901) 685-5348 • Fax (901) 684-5398

CEDAR INTERNAL CORRESPONDENCE

Date: August 26, 1997

To: Neil Robbins
Bob Christian

From: Randal Tomblin
JRT-20-97

cc: C. McGee
J. Whitsitt
J. Hanna
E. White

Subject: DCA Purchases *JRT*

As we pick up steam on production for Riceco, we will be a net purchaser of DCA from Bayer.

In order to minimize cost to Riceco (freight and import duty) and to Cedar (for DCA shipped to Europe for diuron production on behalf of Cedar or Federssen), please establish necessary tracking procedures to:

- Ensure that the net cost of all DCA purchased or traded from any source is used to calculate the propanil transfer prices to Riceco.
- Ensure that the costs of DCPI and diuron are calculated using Cedar DCA cost regardless of the source of the DCA.
- Do not drum any DCA for shipment unless and until I have been consulted on the matter.

If you have any questions, please call.

Randal



5100 Poplar Avenue • Suite 2414 • Memphis, TN 38137 • (901) 685-5948 • Fax (901) 684-5398

Facsimile Cover Sheet

To: Neil Rokins
Company: West Helena
Fax No:

From: Randal Tomblin

Date: March 19, 1998

cc:

No. Pages: 1 (including cover)

Neil:

According to Feddersen/ Fowler, it seems we are still short one invoice for 66MT DCA at \$3.30/kg.

Could you please review the shipments over the last six months or so? I'm not sure where we are, but Balint claims we hav not billed all material. Perhaps Julie could help if you need it.

Randal

CONFIDENTIALITY NOTICE

This facsimile transmission is intended for the addressee named above. It may contain information that is privileged, confidential, or otherwise protected from use and disclosure. If you are not the intended recipient, you are hereby notified that any review, disclosure, copying, or dissemination of this transmission, or the taking of any action in reliance on its contents, or other use is strictly forbidden. If you have received this transmission in error, please notify us by telephone immediately so we can arrange for its return to us. Thank you for your cooperation.



5100 Poplar Avenue • Suite 2414 • Memphis, TN 38137 • (901) 685-5348 • Fax (901) 684-5398

CEDAR INTERNAL CORRESPONDENCE

Date: April 4, 1998

File
To: ~~Chris McGee~~
Geoff Pratt

2 page

From: Randal Tomblin *RT*
JRT-20-98

cc:

Subject: Ethephon

Per the attached, you will see that we will not produce ethephon for Rhone-Poulenc during 1998 (hurrah!!).

As initially thought, A&W's sudden interest in our producing for them again is, indeed, because R-P asked them to try to fill up 4 months. And, of course, our obligation is to work to do so to mitigate any exposure that R-P has to occupy that time. This must, however, be done with complete objectivity, i.e., we should do everything that we can to use the idle time in unit #5, but only if it makes good technical sense. We can not afford to destroy the plant with corrosion, etc. And, if A&W does come in, we must make sure that the project generates a minimum of \$300,000 per month plus raw materials, utilities, etc., hopefully more. If you have any questions, let me know.

Randal

AB0000093096

**SECTEUR AGRO**

14-20, RUE PIERRE BAIZET B.P. 9163
69263 LYON CEDEX 09
TEL. 72.29.25.25 FAX 72.29.21.99
TEL. DIRECT (33) (0) 72 85 25 12
FAX DIRECT : (33) (0) 72 85 21 78

CEDAR CHEMICALS Corp.
5100 Poplar Avenue
Suite 2414
MEMPHIS, TN 38137
USA
Attn : Mr. Randal Tomblin

Lyon, le **April 2nd, 1998**

o/ref.: JP/no-98019

Dear Randal,

Both Hans and myself wish to thank you sincerely for the nice welcome that you extended to us on the occasion of our visit of March 11.

Hans will separately comment, eventually, on the DCA/DCPI and Nitro DZ issues.

As far as Ethephon is concerned, we have carefully reviewed the overall production picture at RPA, and have come to the conclusion that we shall not manufacture at Cedar during this campaign (98). In these conditions, we are seeking any alternative solution to occupy the 4 months of the plant. We recently had a chance to raise the question with Albright & Wilson, who were positive on the principle. Perhaps they have already been in touch with you, please let us know. As agreed between us, you also mentioned that you would simultaneously be looking for other manufacturing businesses ; we hope that you can be successful, and that between yourself, Albright & Wilson, and eventually ourselves, we can occupy the plant for the time it was supposed to work on ethephon.

I trust that the above is well in line with what was discussed during our meeting. We are looking forward to your comments, if any.

Best Regards.

A handwritten signature in black ink, appearing to read 'JP Chalmette', with a long horizontal stroke extending to the right.

Jean-Pierre CHALMETTE

cc : H. Moser
J. Sorrell
S. Oestraicher / P. Timesz
F. Janasiewicz



5100 Poplar Avenue • Suite 2414 • Memphis, TN 38137 • (901) 685-5348 • Fax (901) 684-5398

CEDAR INTERNAL CORRESPONDENCE

Date: April 4, 1998

To: Chris McGee
Geoff Pratt

2 page

From: Randal Tomblin *RT*
JRT-20-98

cc:

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Randal

*File in
Ethephone
Folder*

**SECTEUR AGRO**

14-20, RUE PIERRE SAIZET B.P. 9163
69263 LYON CEDEX 09
TEL. 72 85 25 25 FAX 72 85 21 70
WEB SITE: www.rhone-poulenc.com
FAX DIRECT : (33) (0) 72 85 21 70

CEDAR CHEMICALS Corp.
5100 Poplar Avenue
Suite 2414
MEMPHIS, TN 38137
USA
Attn : Mr. Randal Tamblyn

LYON, le April 2nd, 1998

of ref.: DP/ao-98019

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Jean-Pierre CHALMETTE

cc : H. Moser
J. Sornell
S. Oestreicher / P. Timmesz
F. Janasiewicz

CEDAR CHEMICAL
CUSTOM MANUFACTURING
5100 POPLAR AVENUE
SUITE 2414
MEMPHIS, TN 38137

Facsimile Transmittal

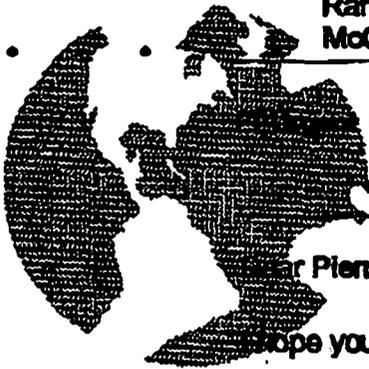
To: Pierre LeRoy Fax: 334 72/86/2066

Rhone Poulenc Agri

From: Geoffrey L. Pratt Date: 06/02/98

Re: Pages: 2

CC: Don Malcolm, Ed White,
Randal Tomblin, Chris
McGeer



- For Review
- Please Comment
- Please Reply
- Please Recycle

Dear Pierre:

I hope you received the Nitro DZ process data from Don Malcolm dated May 20, 1998. Please let me know if any clarification of this data is required.

It is our understanding that if you are satisfied that we have the correct basis for the project and our approach appears feasible then approval can be obtained from Rhone Poulenc management so that the project can proceed. At present, we have the project on hold awaiting your input.

If approval for the project is received relatively soon and there appears to

CONFIDENTIAL

✓ Jeff need a replacement Alpha Chem & Clean Bottom.

- Jim - need new bottoms filling system & include limitation employee exposure TCAS vapors

✓ DOW

P-P - Nitro-DZ
Pierre Le Roy

Fax: 011-334 72852066

phon: 011-334 7285 ~~2086~~
2600

- Michel
~~Guinaut~~ Jean
deCourse

Tech meeting on July 8th

WHERE?

- process development complete

(- PFD)

30% estimate

- economic



SECTEUR AGRO

14-20 rue Pierre Sabat
69263 LYON Cédex 09 FRANCE

**PROCEDES INDUSTRIELS
- LA DARGOIRE -**

En cas de problème **Claire Djankdossian**
Tel: 04 72/85/2323
Fax: 04 72/85/2066

FAY
P. White WH

Date	22/04/98
Expéditeur/From	P. LE ROY/C. DJANKDOSSIAN
Destinataire/To	CEDAR
Attention	GEOFFREY PRATT
Cop.	/
Objet/Re.	
Pages	1

MESSAGE

Dear Mr Pratt,

Further to your phone conversation with P.LE ROY, I inform you that you can reach him at this address and Phone/Fax numbers :

Att. P. LE ROY
RHONE POULENC AGRO
14/20 rue Pierre Sabat
B.P. 9163
69263 LYON CEDEX 09

Phone : 4-72 85 26 00
Fax : 4-72 85 20 66

Best regards,

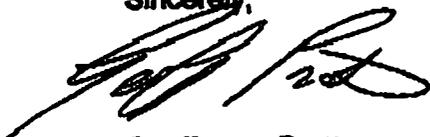
Claire Djankdossian
Assistant to P.LE ROY

Post-it® Fax Note	7871	Date	4/29/98
To	Ed White	From	Geoffrey Pratt
Co./Dept.	Cedar Chemical	Co.	Cedar Chemical
Phone #		Phone #	901-684-5373
Fax #		Fax #	

further engineering definition prior to your visit to our plant in Arkansas,
which was tentatively scheduled for July 8.

We would appreciate your comments and looking forward to seeing you
again.

Sincerely,

A handwritten signature in black ink, appearing to read 'Geoffrey L. Pratt', written in a cursive style.

Geoffrey L. Pratt

GLP/tg

CEDAR CHEMICAL CORPORATION
P. O. BOX 2749, HWY 242 SOUTH
WEST HELENA, ARK 72390
Phone 501-572-3701
Fax 501-572-3795

TO: CEDAR CHEMICAL CORP

FROM: Neil Robbins

ATTN: Ron Fowler

DATE: April 22, 1998

FAX NO: 1-901-684-5398

NO. OF PAGES: 1 of 12

Ron,

In review of the invoices to Feddersen for shipments of DCA I found we invoiced them for the same exact quantity that Bayer invoiced us for.

I also found in our first billing were Trish got Randal's approval to invoice the additional pounds at the \$1.50.

I have enclosed copies of the Bayer invoices for your information.

If you need additional information please advise!

Neil

CC: Randal Tomblin



AB0000079561

CEDAR CHEMICAL CORPORATION
SUITE 2414, 5100 POPLAR AVE
MEMPHIS, TN 38137

PHONE 901/685-5348

I N V O I C E E D I T

2/10/98 42607 3/12/98

39463

K. D. FEDDERSEN & CO
UEBERSEEGESELLSCHAFT MBH
GOTENSTRASSE 11 A
P O BOX 10 10 20
HAMBURG GERMANY 20007

3475-00

*** SHIPPED COMPLETE ***

K D FEDDERSEN
EXPORT
SAJOBABONY, HUNGARY

07

CEDAR CHEMICAL CORPORATION
P O BOX 2900
DEPARTMENT 161
MEMPHIS, TN 38101-2900

0700 00 3475-00 42607-000 71502

30 F TOMBLIN COLLECT F

IN TRANSIT SHIPPING POINT TRK

NET DUE 30 DAYS

145964
LBS

0020 20A

00

00

218 196 00

SHIPMENT NOVEMBER 97

*****6/25/97 UPDATE****

PRICE ADJUSTMENT

SAVES INVOICES 3125009 3125012, 3125014 & 3125015

PAY THIS AMOUNT

218,196.00

AB0000079561

42605



REMIT TO:
BAYER CORPORATION
P.O. BOX 75662
CHARLOTTE, NC 28275-5662

FIBERS ORGANICS AND RUBBER DIV
100 BAYER ROAD
PITTSBURGH, PA. 15205

ORDER INVOICE
BILL TO: 005761-001

NO:3125009 DATE: 01-09-98 CO-21 DIV-10 DP-0012
EXPORT SHIP TO: 037539-001-009404

CEDAR CHEMICAL CORP
P.O. BOX 2749
W HELENA AR 72390

CEDAR CHEMICAL CORP
C/O INTERSEAPORT SERVICE
BREMERHAVEN
GERMANY 61

DUPLICATE INVOICE

PLEASE RETURN THE "DUPLICATE INVOICE" COPY WITH
REMITTANCE TO INSURE PROPER PAYMENT IS APPLIED TO YOUR
ACCOUNT

PURCHASE ORDER #:04-108029
FOB:LEVERKUSEN, GE

ORDER INVOICE NO: 3125009 DATE: 01-09-98
FREIGHT: COLLECT DATE SHIPPED: 01-09-98

ITEM	CODES	DESCRIPTION	QUANTITY	UNIT PRICE	AMOUNT
01	N826	3,4-DICHLOROANILINE, PURE	36,366.00	1.64500	59,822.07
080081	06Y65384	66 X 551.00 LB DRUM (1751)			

SPECIAL PRICING APPLIES

06Y65384

ITEM CODE TERMS AND CONDITIONS FOR EACH ITEM
(0005) NET 30 DAYS

TOTAL AMOUNT FOR THIS ORDER INVOICE 59,822.07

*** EXPORT SHIPMENT ***

R36-D01-T001-P ---*** CO-21 DIV-10 009404 PAGE 1 LAST PAGE
666 CUSTOMER REQUEST CARR *20CUSE 0175 0175 BAYER CORPORATION **0032

TERMS AND CONDITIONS: NOTWITHSTANDING ANY CONTRARY OR INCONSISTENT CONDITIONS THAT MAY BE EMBODIED IN YOUR PURCHASE ORDER YOUR ORDER IS ACCEPTED
SUBJECT TO THE PRICES, TERMS AND CONDITIONS OF THE MUTUALLY EXECUTED CONTRACT BETWEEN US. OR, IF NO SUCH CONTRACT EXISTS YOUR ORDER IS ACCEPTED
SUBJECT TO OUR REGULAR SCHEDULED PRICE AND TERMS IN EFFECT AT TIME OF SHIPMENT AND SUBJECT TO THE TERMS AND CONDITIONS PRINTED ON THE REVERSE SIDE
HEREOF

MB258
Rev 1/85

CUSTOMER'S INVOICE

Bayer Corporation, Pittsburgh, PA 15205-8741

AB0000079561

REMIT TO:

BAYER CORPORATION
P.O. BOX 75662
CHARLOTTE, NC 28275-5662

FIBERS ORGANICS AND RUBBER DIV
100 BAYER ROAD
PITTSBURGH, PA. 15205

ORDER INVOICE

NO:3125012 DATE: 01-09-98 CO-21 DIV-10 DP-0012

BILL TO: 005761-001

EXPORT SHIP TO: 037539-001-009404

CEDAR CHEMICAL CORP
P.O. BOX 2749
W HELENA AR 72390

CEDAR CHEMICAL CORP
C/O INTERSEAPORT SERVICE
BREMERHAVEN
GERMANY 61

DUPLICATE INVOICE

PLEASE RETURN THE "DUPLICATE INVOICE" COPY WITH
REMITTANCE TO INSURE PROPER PAYMENT IS APPLIED TO YOUR
ACCOUNT

PURCHASE ORDER #:04-108029
FOB:LEVERKUSEN, GE

ORDER INVOICE NO: 3125012 DATE: 01-09-98
FREIGHT: COLLECT DATE SHIPPED: 01-09-98

ITEM	CODES	DESCRIPTION	QUANTITY	UNIT PRICE	AMOUNT
01	N826	3,4-DICHLOROANILINE, PURE	36,366.00	1.64500	59,822.07
080081	06Y65385	66 X	551.00 LB	DRUM (1751)	

SPECIAL PRICING APPLIES

06Y65385

ITEM CODE TERMS AND CONDITIONS FOR EACH ITEM
(0005) NET 30 DAYS

TOTAL AMOUNT FOR THIS ORDER INVOICE 59,822.07

* * * EXPORT SHIPMENT * * *

R36-D01-T001-P ---*** CO-21 DIV-10 009404 PAGE 1 LAST PAGE
666 CUSTOMER REQUEST CARR *20CUS@ 0175 0175 BAYER CORPORATION

**0033

TERMS AND CONDITIONS: NOTWITHSTANDING ANY CONTRARY OR INCONSISTENT CONDITIONS THAT MAY BE EMBODIED IN YOUR PURCHASE ORDER, YOUR ORDER IS ACCEPTED
SUBJECT TO THE PRICES, TERMS AND CONDITIONS OF THE MUTUALLY EXECUTED CONTRACT BETWEEN US OR, IF NO SUCH CONTRACT EXISTS, YOUR ORDER IS ACCEPTED
SUBJECT TO OUR REGULAR SCHEDULED PRICE AND TERMS IN EFFECT AT TIME OF SHIPMENT AND SUBJECT TO THE TERMS AND CONDITIONS PRINTED ON THE REVERSE SIDE
HEREOF

REMIT TO:
BAYER CORPORATION
P.O. BOX 75662
CHARLOTTE, NC 28275-5662

FIBERS ORGANICS AND RUBBER DIV
100 BAYER ROAD
PITTSBURGH, PA. 15205

ORDER INVOICE
BILL TO: 005761-001

NO:3125014 DATE: 01-09-98 CO-21 DIV-10 DP-0012
EXPORT SHIP TO: 037539-001-009404

CEDAR CHEMICAL CORP
P.O. BOX 2749
W HELENA AR 72390

CEDAR CHEMICAL CORP
C/O INTERSEAPORT SERVICE
BREMERHAVEN
GERMANY 61

DUPLICATE INVOICE

PLEASE RETURN THE "DUPLICATE INVOICE" COPY WITH
REMITTANCE TO INSURE PROPER PAYMENT IS APPLIED TO YOUR
ACCOUNT.

PURCHASE ORDER #:04-108029
FOB:LEVERKUSEN, GE

ORDER INVOICE NO: 3125014 DATE: 01-09-98
FREIGHT: COLLECT DATE SHIPPED: 01-09-98

ITEM	CODES	DESCRIPTION	QUANTITY	UNIT PRICE	AMOUNT
01	N826	3,4-DICHLOROANILINE, PURE	36,366.00	1.64500	59,822.07
080081	06Y65386	66 X 551.00 LB DRUM (1751)			

SPECIAL PRICING APPLIES

06Y65386

ITEM CODE TERMS AND CONDITIONS FOR EACH ITEM
(0005) NET 30 DAYS

TOTAL AMOUNT FOR THIS ORDER INVOICE 59,822.07

*** EXPORT SHIPMENT ***

R36-D01-T001-P --*** CO-21 DIV-10 009404 PAGE 1 LAST PAGE
666 CUSTOMER REQUEST CARR *20CUS@ 0175 0175 BAYER CORPORATION

**0034

TERMS AND CONDITIONS: NOTWITHSTANDING ANY CONTRARY OR INCONSISTENT CONDITIONS THAT MAY BE EMBODIED IN YOUR PURCHASE ORDER YOUR ORDER IS ACCEPTED
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SUBJECT TO OUR REGULAR SCHEDULED PRICE AND TERMS IN EFFECT AT TIME OF SHIPMENT AND SUBJECT TO THE TERMS AND CONDITIONS PRINTED ON THE REVERSE SIDE
HEREOF



REMIT TO:
 BAYER CORPORATION
 P.O. BOX 75662
 CHARLOTTE, NC 28275-5662

FIBERS ORGANICS AND RUBBER DIV
 100 BAYER ROAD
 PITTSBURGH, PA. 15205

ORDER INVOICE
 BILL TO: 005761-001

NO: 3125015 DATE: 01-09-98 CO-21 DIV-10 DP-0012
 EXPORT SHIP TO: 037539-001-009404

CEDAR CHEMICAL CORP
 P.O. BOX 2749
 W HELENA AR 72390

CEDAR CHEMICAL CORP
 C/O INTERSEAPORT SERVICE
 BREMERHAVEN
 GERMANY 61

DUPLICATE INVOICE

PLEASE RETURN THE "DUPLICATE INVOICE" COPY WITH
 REMITTANCE TO INSURE PROPER PAYMENT IS APPLIED TO YOUR
 ACCOUNT

PURCHASE ORDER #: 04-108029
 FOB: LEVERKUSEN, GE

ORDER INVOICE NO: 3125015 DATE: 01-09-98
 FREIGHT: COLLECT DATE SHIPPED: 01-09-98

ITEM	CODES	DESCRIPTION	QUANTITY	UNIT PRICE	AMOUNT
01	N826	3,4-DICHLOROANILINE, PURE	36,366.00	1.64500	59,822.07
080081	06Y65387	66 X	551.00 LB	DRUM (1751)	

SPECIAL PRICING APPLIES

06Y65387

ITEM CODE TERMS AND CONDITIONS FOR EACH ITEM
 (0005) NET 30 DAYS

TOTAL AMOUNT FOR THIS ORDER INVOICE 59,822.07

*** EXPORT SHIPMENT ***

R36-D01-T001-P ---*** CO-21 DIV-10 009404 PAGE 1 LAST PAGE
 666 CUSTOMER REQUEST CARR *20CUS@ 0175 0175 BAYER CORPORATION **0035

TERMS AND CONDITIONS: NOTWITHSTANDING ANY CONTRARY OR INCONSISTENT CONDITIONS THAT MAY BE EMBODIED IN YOUR PURCHASE ORDER YOUR ORDER IS ACCEPTED
 SUBJECT TO THE PRICES, TERMS AND CONDITIONS OF THE MUTUALLY EXECUTED CONTRACT BETWEEN US, OR IF NO SUCH CONTRACT EXISTS YOUR ORDER IS ACCEPTED
 SUBJECT TO OUR REGULAR SCHEDULED PRICE AND TERMS IN EFFECT AT TIME OF SHIPMENT AND SUBJECT TO THE TERMS AND CONDITIONS PRINTED ON THE REVERSE
 HEREOF

MB258
 Rev. 1/85

CUSTOMER'S INVOICE

Bayer Corporation, Pittsburgh, PA 15205-5741

AB0000079561

KCCT

PRINT DATE 6/25/97 TIME 8:13:45

CEDAR CHEMICAL CORPORATION
MEMPHIS, TN.

ORDER DATE 4/23/97
ORDER NUMBER 42607

*****OFFICE COPY*****

SOLD TO:

K. D. FEDDERSEN & CO.
UEBERSEEGESELLSCHAFT MBH
GOTENSTRASSE 11 A
P.O. BOX 10 10 20
HAMBURG GERMANY 20007

SHIP TO

K. D. FEDDERSEN
EXPORT
SAJOBABONY, HUNGARY

CHANGE ORDER

00000-0000

REQUESTED	CUST. NO.	CUST. ORDER NO.	SALESMAN	FRT. PPD/COL
4/23/97	3475-00	715027	J. WHITSITT	PREPAID

27

SHIPPED FROM	FOB POINT	SHIP VIA	TERMS
WEST HELENA PLANT	SHIPPING POINT TRK		NET DUE 30 DAYS

QTY ORDERED	CONTAINER SIZE	ITEM NUMBER	DESCRIPTION	UNIT PRICE	BILLING UNIT	EXTENDED SALE PRICE
-------------	----------------	-------------	-------------	------------	--------------	---------------------

145200	LBS	3020	DCA	BULK	LBS	217,800.00
--------	-----	------	-----	------	-----	------------

145404

I SHIPMENT: NOVEMBER 97
I *****6/25/97 UPDATE*****
I PRICE ADJUSTMENT.

Handwritten notes and scribbles

Handwritten circled amount: \$218,190

TOTAL ORDER AMOUNT 217,800.00

**Germany
Bayer
Jan 98*

PHONE: 901/685-5348

CEDAR CHEMICAL CORPORATION
SUITE 2414, 5100 POPLAR AVE.
MEMPHIS, TN 38137

I N V O I C E E D I T

3/19/98 42608 4/18/98

3966A

K. D. FEDDERSEN & CO.
UEBERSEEGESELLSCHAFT MBH
GOTENSTRASC 11 A
P O BOX 10 10 20
HAMBURG GERMANY 20007

3475-00

*** SHIPPED COMPLETE ***

K D. FEDDERSEN
EXPORT
SAJOBABONY, HUNGARY

05

CEDAR CHEMICAL CORPORATION
P. O. BOX 2900
DEPARTMENT 161
MEMPHIS, TN 38101-2900

0/00/00 3475-00 42608-000 715028 30 R. TOMBLIN COLLECT P/C
97 IN TRANSIT SHIPPING POINT TRK NET DUE 30 DAYS

45464 3020 DCA BULK LBS 218,196.00
LBS

E 66,000 KGS X \$3.30 = \$217,800.00
I SHIPMENT, DECEMBER 97
I DOCUMENT REQ'D. CERT. OF ANALYSIS
I ****6/25/97 UPDATE****
I PRICE ADJUSTMENT
I BAYER INVOICES: 3125016, 3125017, 3125018 & 3125019

PAY THIS AMOUNT 218,196.00

42608



West Helena Arr. Date

REMIT TO:
BAYER CORPORATION
P.O. BOX 75662
CHARLOTTE, NC 28275-5662

RECEIVED
FEB 17 1998
RECEIVED

FIBERS ORGANICS AND RUBBER DIV
100 BAYER ROAD
PITTSBURGH, PA. 15205

ORDER INVOICE
BILL TO: 005761-001

NO: 3125016 DATE: 02-06-98 CO-21 DIV-10 DP-0012
EXPORT SHIP TO: 037539-001-009404

CEDAR CHEMICAL CORP
P.O. BOX 2749
W HELENA AR 72390

CEDAR CHEMICAL CORP
C/O INTERSEAPORT SERVICE
BREMERHAVEN
GERMANY 61

INVOICE

PLEASE RETURN THE "DUPLICATE INVOICE" COPY WITH
REMITTANCE TO INSURE PROPER PAYMENT IS APPLIED TO YOUR
ACCOUNT.

PURCHASE ORDER #: 04-108029
FOB: LEVERKUSEN, GE

ORDER INVOICE NO: 3125016 DATE: 02-06-98
FREIGHT: COLLECT DATE SHIPPED: 01-30-98

ITEM	CODES	DESCRIPTION	QUANTITY	UNIT PRICE	AMOUNT
01	N826	3,4-DICHLOROANILINE, PURE	36,366.00	1.64500	59,822.07
080081	06Y65388	66 X	551.00 LB	DRUM (1751)	

SPECIAL PRICING APPLIES

06Y65388

ITEM CODES TERMS AND CONDITIONS FOR EACH ITEM

VENDOR #		INVOICE #	
2987		3125016	
P.O. #	REC. RPT. #	INV. CD	INV. DATE
108029		1	020698
TERMS CODE	DUE DATE	FRT. BILL CD	SALES ORDER #
5			
INVOICE AMT.		DISC. ALLOWED	
59,822.07			
GL NUMBER	AMOUNT	WORK ORDER #	
0153 5910	59,822.07		
DONE BY	DATE	APPROVED BY	ENTERED BY

59,822.07

LAST PAGE
CORPORATION

**0024

IF IN YOUR PURCHASE ORDER, YOUR ORDER IS ACCEPTED
IF NO SUCH CONTRACT EXISTS, YOUR ORDER IS ACCEPTED
TERMS AND CONDITIONS PRINTED ON THE REVERSE SIDE

AB0000079561



REMIT TO:

BAYER CORPORATION
P.O. BOX 75662
CHARLOTTE, NC 28275-5662

FIBERS ORGANICS AND RUBBER DIV
100 BAYER ROAD
PITTSBURGH, PA. 15205

ORDER INVOICE

BILL TO: 005761-001

NO: 3125018

DATE: 02-06-98 CO-21 DIV-10 DP-0012

EXPORT SHIP TO: 037539-001-009404

CEDAR CHEMICAL CORP
P.O. BOX 2749
W HELENA AR 72390

West Helena Acct Dept

RECEIVED
FEB 17 1998
RECEIVED

CEDAR CHEMICAL CORP
C/O INTERSEAPORT SERVICE
BREMERHAVEN
GERMANY 61

INVOICE

PLEASE RETURN THE "DUPLICATE INVOICE" COPY WITH
REMITTANCE TO INSURE PROPER PAYMENT IS APPLIED TO YOUR
ACCOUNT.

PURCHASE ORDER #: 04-108029
FOB: LEVERKUSEN, GE

ORDER INVOICE NO: 3125018 DATE: 02-06-98
FREIGHT: COLLECT DATE SHIPPED: 02-03-98

ITEM	CODES	DESCRIPTION	QUANTITY	UNIT PRICE	AMOUNT
01	N826	3,4-DICHLOROANILINE, PURE	36,366.00	1.64500	59,822.07
080081	06Y65390	66 X 551.00 LB DRUM (1751)			

SPECIAL PRICING APPLIES

06Y65390

ITEM CODE

VENDOR #		INVOICE #	
2987		3125018	
P.O. #	REC. RPT. #	INV. CD	INV. DATE
108029		1	020698
TERMS CODE	DUE DATE	FRT. BILL CD	SALES ORDER #
3			
INVOICE AMT.		DISC. ALLOWED	
59,822.07			
GL NUMBER	AMOUNT	WORK ORDER #	
C. 153 5910	59,822.07		
DONE BY	DATE	APPROVED BY	ENTERED BY
RT	2.29.98	OTT	

59,822.07

LAST PAGE
CORPORATION

**0026

IN YOUR PURCHASE ORDER, YOUR ORDER IS ACCEPTED
IF SUCH CONTRACT EXISTS, YOUR ORDER IS ACCEPTED
TERMS AND CONDITIONS PRINTED ON THE REVERSE SIDE

Corporation, Pittsburgh PA 15205-0741

AB0000079561

West Helena Acc: Dept.



RECEIVED
FEB 17 1998

REMIT TO:
BAYER CORPORATION
P.O. BOX 75662
CHARLOTTE, NC 28275-5662

FIBERS ORGANICS AND RUBBER DIV
100 BAYER ROAD
PITTSBURGH, PA. 15205

ORDER INVOICE
BILL TO: 005761-001

NO: 3125019 DATE: 02-06-98 CO-21 DIV-10 DP-0012
EXPORT SHIP TO: 037539-001-009404

CEDAR CHEMICAL CORP
P.O. BOX 2749
W HELENA AR 72390

CEDAR CHEMICAL CORP
C/O INTERSEAPORT SERVICE
BREMERHAVEN
GERMANY 61

INVOICE

PLEASE RETURN THE "DUPLICATE INVOICE" COPY WITH
REMITTANCE TO INSURE PROPER PAYMENT IS APPLIED TO YOUR
ACCOUNT

PURCHASE ORDER #: 04-108029
FOB: LEVERKUSEN, GE

ORDER INVOICE NO: 3125019 DATE: 02-06-98
FREIGHT: COLLECT DATE SHIPPED: 02-04-98

ITEM	CODES	DESCRIPTION	QUANTITY	UNIT PRICE	AMOUNT
01	N826	3,4-DICHLOROANILINE, PURE	36,366.00	1.64500	59,822.07
080081	06Y65391	66 X	551.00 LB	DRUM (1751)	

SPECIAL PRICING APPLIES

06Y65391

TERMS AND CONDITIONS FOR EACH ITEM

VENDOR #		INVOICE #	
2987		3125019	
P.O. #	REC RPT. #	INV. CD	INV. DATE
108029		1	020698
TERMS CODE	DUE DATE	FRT. BILL CD	SALES ORDER #
3			
INVOICE AMT.		DISC. ALLOWED	
59,822.07			
GL NUMBER	AMOUNT	WORK ORDER #	
C 153 5910	59,822.07		
DONE BY	DATE	APPROVED BY	ENTERED BY
RK	2-22-98		

59,822.07

LAST PAGE
CORPORATION

**0027

ED IN YOUR PURCHASE ORDER. YOUR ORDER IS ACCEPTED
NO SUCH CONTRACT EXISTS. YOUR ORDER IS ACCEPTED
TERMS AND CONDITIONS PRINTED ON THE REVERSE SIDE

orporation Pittsburgh PA 15205-8711 007956 AB000007956

COMMUNICATION RESULT REPORT

501 572 3795

CEDAR CHEMICAL CORP.

04-22-98 06:51AM

FILE	DATE & TIME	FILE TYPE	DELAYED	DESTINATION/TO:/FROM:	PAGE	REMARKS	SIZE
26	04-22 06:42AM	MEMORY-S		TO : CEDAR EXTRA	04		0126

NO.	PHONE / TTI NO.	COMM MODE	RESULT	NO.	PHONE / TTI NO.	COMM MODE	RESULT
001	050: CEDAR EXTRA		GOOD				

CEDAR CHEMICAL CORPORATION
P. O. BOX 2749, HWY 242 SOUTH
WEST HELENA, ARK 72390
Phone 501-572-3701
Fax 501-572-3795

TO: CEDAR CHEMICAL CORP

FROM: Neil Robbins

ATTN: Ron Fowler

DATE: April 22, 1998

FAX NO: 1-901-684-5398

NO. OF PAGES: 1 of 12

Ron,

In review of the invoices to Peddersen for shipments of DCA I found we invoiced them for the same exact quantity that Bayer invoiced us for.

I also found in our first billing were Trish got Randal's approval to invoice the additional pounds at the \$1.50.

I have enclosed copies of the Bayer invoices for your information.

If you need additional information please advise!

Neil

CC: Randal Tomblin



COMMUNICATION RESULT REPORT

501 572 3795

CEDAR CHEMICAL CORP.

04-22-98 06:48AM

FILE	DATE & TIME	FILE TYPE	DELAYED	DESTINATION/TO:/FROM:	PAGE	REMARKS	SIZE
41	04-22 06:41AM	MEMORY-S		TO :CEDAR MEMPHIS	12		0343

NO.	PHONE / TTI NO.	COMM MODE	RESULT	NO.	PHONE / TTI NO.	COMM MODE	RESULT
001	001: CEDAR MEMPHIS		GOOD				

CEDAR CHEMICAL CORPORATION
 P. O. BOX 2749, HWY 242 SOUTH
 WEST HELENA, ARK 72390
 Phone 501-572-3701
 Fax 501-572-3795

TO: CEDAR CHEMICAL CORP

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NO. OF PAGES: 1 of 12

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Neil

CC: Randal Tomblin .

F A X

• Cedar Chemical Corp.
• 5100 Poplar Ave
• Memphis, Tn 38138
•
•
•
•
•
•

To: Neil Robbins
Company:
Fax number: +1 (870) 572-3795
Business phone:

From: Ron Fowler
Fax number: +1 (901) 684-5384
Business phone: 901-684-5384
Home phone: 901-758-2265

Date & Time: 4/21/98 2:49:13 PM
Pages: 2
Re: Feddersen

**Cedar Chemical Corp.
Offset of Feddersen Invoices**

	<u>Per Cedar</u>	<u>Per Feddersen</u>
Invoices due Cedar from Feddersen		
Inv. #		
39463	218,196.00	217,800.00
39869	218,196.00	217,800.00
	<u>436,392.00</u>	<u>435,600.00</u>
 Invoices due Feddersen from Cedar		
215205	311,364.80	311,364.80
47009	19,250.00	19,250.00
215702	261,160.20	261,160.20
	<u>591,775.00</u>	<u>591,775.00</u>
 Net Due Feddersen	<u><u>(155,383.00)</u></u>	<u><u>(156,175.00)</u></u>
Diff	<u><u>(792.00)</u></u>	

1 901 684 5384

04-21-98 01:50PM P002 #45

K. D. Feddersen & Co Ueberseegesellschaft

POB 10 10 20 * D-20007 Hamburg / Gotenstr. 11A * D-20097 Hamburg

Telefon: 040 / 23507-01 * Telefax: 040 / 23507-450 * Telex: 2163481 kdfu d



TO CEDAR CHEMICAL CORP.
ATT.:MR R. TOMBLIN
AND MR R. FOWLER

YOUR DCA INVOICE NO.:39669, DATED 3.19.98

IN ACC. TO FACTORY REPORT 66000 KGS DCA ARRIVED (4X16500KGS)
TO SAJOBABONY ON 5 AND 6.2.1998.
PRICE OF THE PRODUCT IS USD 3,30/KG CIF, WHICH MEANS A TOTAL
SUM OF USD 217800.- AND NOT AS PER YOUR INV. 218196.-
(MOST PROBABLY SOME DIFFR. BETWEEN KG/LB.)

WE WILL CONSIDER USD 217800.- AGAINST YOUR INV.39669.

OUR INVOICE NO. 215205 AND DEBIT NOTE NO.47009 STILL SHOWS
AN OUTSTANDING SUM OF 112814,80,AS PER AGREEMENT WITH MR FOWLER
ON 11.2.98,WE DEDUCT THIS SUM FROM YOUR INVOICE AND TRANSFER AGAINST YOUR
INVOICE NO.39669 USD 104985,20.

*TRISH,
PLEASE PULL
THE INVOICE AND
BACK UP FOR ME.
THANK
NEIL*

BEST REGARDS
K. BALINT

COMMUNICATION RESULT REPORT

501 572 3795

CEDAR CHEMICAL CORP.

04-22-98 08:38AM

FILE	DATE & TIME	FILE TYPE	DELAYED	DESTINATION/TO:/FROM:	PAGE	REMARKS	SIZE
16	04-22 08:31AM	MEMORY-S		TO : CEDAR MEMPHIS	12		0342

NO.	PHONE / TTI NO.	COMM MODE	RESULT	NO.	PHONE / TTI NO.	COMM MODE	RESULT
001	001: CEDAR MEMPHIS		GOOD				

CEDAR CHEMICAL CORPORATION
P. O. BOX 2749, HWY 242 SOUTH
WEST HELENA, ARK 72390
Phone 501-572-3701
Fax 501-572-3795

TO: CEDAR CHEMICAL CORP

FROM: Neil Robbins

ATTN: Ron Fowler

DATE: April 22, 1998

FAX NO: 1-901-684-5398

NO. OF PAGES: 1 of 12

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If you need additional information please advise!

Neil

CC: Randal Tomblin



CEDAR WEST HELENA													CC:	C McGEE	R Farhood	Fda Copy
PROPANE PRODUCTION AND USAGE														G Saterfield	P Fields	
AS OF														B Christian	Mo Book	
Apr-69																
FRESH GOODS INFO																
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Y-T-D	#B or Gal	Std	
DCA	1,008,108	1,057,745	1,010,116	1,388,029									4,462,898			
ODCB	1,138,109	1,120,877	1,281,878	1,648,398									5,198,282	1 1948	1 1300	
Nitric Acid	482,059	474,881	542,539	729,642									2,228,101	0 5017	0 4970	
Sulfuric Acid	971,379	911,899	1,050,090	1,378,999									4,313,367	0 8885	0 8550	
Plat/Carb Cata	282	265	287	381									1,195	0 0003	0 0003	
Hydrogen	51,718	48,926	58,409	72,941									231,994	0 0520	0 0510	
Soda Ash	12,016	2,608	10,876	9,454									35,954	0 0079	0 0110	
Lime	37,600	23,400	27,400	33,600									122,000	0 0273	0 0306	
Caustic 50%	78,898	47,210	29,724	48,095									198,415	0 0445	0 0182	
Hydr Peroxide	8,000	1,000	4,000	7,500									20,500	0 0048	0 0050	
Methanol	1142												1,142	0 0003		
TEPA	681	853	633	348									2,413	0 0005	0 0006	
Ferrous Sulfate	138	50	125	213									526	0 0001	0 0001	
Propane Tech	1,088,110	1,496,470	1,388,885	1,500,572									5,472,887			
DCA	834,820	1,127,820	1,011,663	1,151,322									4,125,225	0 7538	0 7550	
P Acid	455,484	613,228	588,309	644,465									2,278,584	0 4188	0 3707	
P. Anny.	2,110	992		1,081									4,183	0 0008	0 0160	
Flaked Tech	105,000	48,500	22,500	389,000									543,000			
P. Tech	105,000	48,500	22,500	389,000									543,000	1 0000	1 0000	
3/4 Bulk	29,843			26,680									47,523			
P. Tech	63,230			86,883									150,083	3 1580	3 2180	
Isoph	40,200			59,219									99,419	2 0818	2 2500	
MO																
Emul															0 0143	
Aromatic B	39,628			48,377									88,005	1 8518	1 8120	
Armud	28,080			35,879									61,759	1 2896	1 2893	
Sun Oil	8,680			11,690									20,570	0 4328	0 4300	
Terr 500																
4/4 Bulk	20,300	99,488	134,633	32,676									286,897			
P. Tech	84,040	414,605	539,255	135,605									1,173,505	4 0888	4 1500	
Isoph	15,020	78,687	101,637	24,308									217,760	0 7587	0 7200	
MO	60,100	298,590	390,039	97,087									845,816	2 9471	2 7400	
Emul	18,680	87,604	128,365	30,225									273,874	0 8543	0 8250	
Aromatic B																
Armud																
Isoph/Albk																
4/4 X Bulk	40,877												40,877			
P. Tech	168,940												168,940	4 1328	4 1270	
MO	67,800												67,800	1 8537	1 7820	
Isoph	67,600												67,600	1 8537	1 6880	
Emul	33,619												33,619	0 8224	0 7820	
Sun Oil	16,400												16,400	0 4012	0 3041	
Aromatic B															0 0503	
Armud	7,200												7,200	0 1781	0 3944	
Stem Bulk	75,631	178,838	87,198	103,924									456,591			
P. Tech	218,185	753,950	405,130	428,894									1,808,589	4 1787	4 1270	
Isoph/Albk	280,720	683,190	383,141	406,213									1,776,204	3 8880	3 8280	
Emul	67,780	180,945	88,740	93,643									408,308	0 8984	0 9030	
Isoph		250											250	0 0008		
MO																
Gluron-Days		14	31	30									75			
Standard Grade		131,400	289,200	183,681									574,281			
B Grade																
DCPI		118,800	214,600	143,800									477,300	0 8312	0 8348	
DMA		28,620	63,800	35,616									118,728	0 2087	0 2100	
Neptane		4,968	12,231	6,104									22,301	0 0408	0 0716	
Sulfuric Acid																
50% Rayon Caustic																

FRESHED GOODS MFG CONT'D															Y-T-D	# of Gal	Std
TA-Days	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Y-T-D	# of Gal	Std		
Prod																	
Nitromethane															0.7600		
Formaldehyde															2.5000		
Methanol															0.2480		
Sulfuric Acid															0.0860		
Raney Nickel															0.0110		
Hydrogen															0.1420		
50% Caustic															0.1000		
Wham Prod	100,600	8,370	50,100	102,709									281,978				
Flake Tech	180,000	204,000	216,000	522,000									1,122,000	4.2628	4.1240		
Morwet	7,750	8,400	9,000	21,690									47,840	0.1828	0.0970		
Polyton O	210	238	252	609									1,309	0.0050	0.0100		
Glycerine	10,500	11,900	12,600	30,450									65,450	0.2498	0.2430		
Allona															0.3890		
Kelzan	390	442	468	1,131									2,431	0.0093	0.0050		
Voegum	8,340	9,490	10,090	24,050									51,980	0.1989	0.1170		
AntiRoam DC 1500	320	382	372	889									1,963	0.0075	0.0010		
Technical Carbaryl	300	340		670									1,510	0.0059	0.0070		
Ethaphon	200	227	240	580									1,247	0.0048	0.0040		
Soprophor 4D384	19,680	22,304	23,616	57,072									122,672	0.4683	0.1460		
Proxal	1,203	2,855	1,476										5,334	0.0204			
Formaldehyde	58	284	386										708	0.0027			
Citric Acid																	
Diam Prod			138,600	62,520									201,120				
Flake Tech			457,500	329,400									786,900	3.0037	4.1240		
Voegum			21,000	15,120									36,120	0.1379	0.1170		
Glycerine			27,000	19,440									46,440	0.1773	0.2430		
Soprophor 4D384			49,500	35,640									85,140	0.3250	0.1460		
Morwet			18,750	13,500									32,250	0.1231	0.0970		
Polyton O			525	378									903	0.0034	0.0100		
Ethaphon			500	350									850	0.0033	0.0400		
Proxal			3,075	3,913									6,988	0.0257			
Formaldehyde			735	675									1,410	0.0054			
AntiRoam			775	598									1,333	0.0051	0.0010		
Benzaluron			3,525	2,538									6,063	0.0231			
Kelzan			975	702									1,677	0.0084	0.0050		
Butox 178 Prod				18,691									18,691				
2-4 D-B Acid				35,715									35,715	1.9108	1.8000		
DMA				16,845									16,845	0.8905	0.8000		
Citric Acid				4,965									4,965	0.2858	0.2800		
Butox 200 Prod	10,840	1,680											12,500				
2-4 D-B Acid	23,060	3,690											26,940	2.1592	2.0800		
DMA	12,540	2,010											14,550	1.1840	1.1000		
Citric Acid	4,985	760											5,425	0.4340	0.4200		
FRESH GOODS PKG (Number Containers)													Y-T-D	Total	Grand		
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Containers	Gals/Lbs	Total		
Prop 360 35 g																	
Prop 360 200L																	
Prop 360 210L																	
Supernox 360 200L																	
3# 20L				4,873									4,873	25,729			
3# 50L																	
3# 200L																	
3# 55L		379											379	20,845	46,674		
4# 20L																	
4# 35			3,528	3,778									7,302	255,670			
4# 200L		529											529	27,952			
4# 210L																	
4# 55		225	(14)										211	11,605			
Supernox 480 200L																	
Propenex 4# 35																	
Propenex 500 55 g															295,127		
Stam 35	1,337	3,637	3,585	2,918									11,357	397,495	397,495		
Them 25 g																	

FRESH GOODS PKG (Number Containers)														Y-T-D	Total	Grand
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Containers	Gals/Lbs	Total	
Pure Tromethamine 2																
Trometamol 25 Kg																
Trometamol 60 Kg																
Tris Ultra Pure 100Kg																
Pure Trish Mcl 100 Kg																
Wham Buik				17,359									17,359	17,359		
Wham 2x2.5																
Wham 5																
Wham 100 L																
Wham 30																
Super Wham 2x2.5																
Super Wham 30	3,360	279	1,670	2,845									6,154	244,620	261,979	
Dust 30			4,620	2,084									6,704	201,120	201,120	
Bandit 200L																
175 4x1				2,029									2,029	6,118		
175 2x2.5				2,115									2,115	10,578		
175 55															18,691	
200 4x1																
200 2x2.5	2,168	332											2,500	12,500		
200 55															12,500	
Flakad Tech 25 Kg	1,122	1,240	1,120	1,360									4,842	266,794	266,794	
Duron Col 248 Kg																
Duron Col 224 Kg																
Butoxone 7500 10x2.33																
CUSTOM MFG																
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Containers	Gals/Lbs	Total	
Acmtuorten-Days	15	28	21	30									94			
Prod 100% Al	96,014	143,900	151,181	151,529									542,723			
Mixed Acid	69,967												69,967	0 1269		
Peridone D				44,940									44,940	0 0829		
Sulfuric Acid		22,888	18,170	22,310									63,368	0 1168	0 2400	
Nitro Acid		43,806	37,056	47,074									127,936	0 2357	0 2600	
Acetic Anhydride	62,070	123,856	106,704	120,842									413,472	0 7432	0 7200	
PCE		94,940											94,940	0 1749	0 1200	
Ethylene Dichloride																
50% Caustic	182,938	166,332	156,872	187,976									694,118	1 2790	1 2000	
R118118	245,500	480,000	432,000	520,000									1,677,500	3 0909	3 5400	
BFG-Days																
Production																
CYMP-Days														4		
Prod 100% Al	4,230												4,230			
DICHL	7,330												7,330	0 0135		
IPA	10,670												10,670	0 0197		
50% Caustic	5,123												5,123	0 0094		
Catalyst	28												28	0 0001		
Hydrogen	174												174	0 0000		
HCL	10												10	0 0000		
Dover Phos-Days														6	29	30
Production			8,460	28,720									38,180			
Phenol		8,400	38,525	40,435									87,360	0 1518		
Caustic		20	140	160									320	0 0006		
TTP	7,800	76,532	64,421										147,753	0 2722		
PE	1,588	13,948	14,070										29,613	0 0548		
DCP	10,576	79,578	83,383										173,536	0 3198		
Xylene	50,980	96,980											147,960	0 2728		
Methanol		51,720											51,720	0 0953		
Phenol2																
Ethaphon-Days																
Prod 100% Al																
Ethylene Oxide															1 198	
Phosphorus Trichloride															1 242	
Anhydrous Hydr Chloride															0 860	
Sulfuric Acid																
50% Caustic															1 189	

CUSTOM MPG	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Containers	Gal/Lbs	Total
FIBC 6-40lb-Days	31	28	31	30									120		
Prod 100% AI	21,781	18,705	28,822	34,017									103,325		
Step 3	127,863	89,421	168,148	168,104									651,538	5 3378	5,820
Step 4															1 038
Step 5															1 000
Calcium Chloride															
Chlorine	13,717	8,260	11,810	12,091									45,878	0 4450	0 170
Aluminum Sulfate	34,347	25,049	38,178	50,470									148,044	1 4134	1 530
G Acid	14,559	5,852	5,842	15,314									41,387	0 4004	0 900
50% Caustic	7,668	9,280	27,272	25,000									69,220	0 6699	1 020
20% Oleum	108,439	81,999	40,309	148,604									378,251	3 6705	6 160
Methanol	21,458	23,340	12,741	32,502									90,039	0 8714	4 680
Soda Ash	4,900	3,700	3,650	6,000									18,250	0 1768	0 180
Toulene	110,448	114,324	80,155	138,049									452,976	4 3940	4 570
99% Sulfuric Acid				61,200									61,200	0 5823	0 010
Mixed Acid	7,681	5,774	6,455	11,820									31,610	0 3059	0 410

Item No	Std Factor	Usage Factor	Raw Materials Used	Finish Goods			Dr	Cr
				Used	Pkg'd	Mfg'd		
ICA	3020					1,388,929	S 701 1420 1,418,707 58	C 153 6740 (1,418,707 58)
XDCB	41000	1 1300	1 1875	1,849,399			C 153 5520 610,277 28	S 703 1460 (610,277 28)
Itinc Acid	41020	4970	0 5253	729,642			C 153 5540 116,742 72	S 705 1460 (116,742 72)
Ituric Acid	41010	8550	0 8936	1,379,999			C 153 5530 55,189 96	S 704 1460 (55,189 96)
It/Carb Cat	41070	0003	0 0003	381				S 711 1460 (32,766 00)
Hydrogen	41030	0510	0 0525	72,941			C 153 5570 87,529 20	S 706 1460 (87,529 20)
Soda Ash	41050	0110	0 0068	9,454			C 153 5850 42,744 62	S 708 1460 (1,229 02)
Ime	41060	0305	0 0242	33,600				S 709 1460 (2,352 00)
10% Rayon Caustic	45080	0182	0 0346	48,095				S 792 1460 (3,847 60)
Hydrogen Peroxide	41090	0030	0 0054	7,500				S 790 1460 (2,550 00)
Methanol	42640							S 735 1460
EPA		0006	0 0002	346				
Ferrous Sulfate		0001	0 0002	213				
Propanil Tech	3000					1,500,572	S 702 1420 1,515,577 72	C 154 6740 (1,515,577 72)
JCA-3rd Party	40100	0 7550					C 154 5630	S 710 1460
JCA-Cedar	3020	0 7550	0 7673		1,151,322		C 154 6840 1,174,348 44	S 701 1420 (1,174,348 44)
2 Acid	40200	0 3707	0 4295	644,465			C 154 5640 180,450 20	S 712 1460 (180,450 20)
2 Anhy	40300	0 0150	0 0007	1,081			C 154 5650 994 52	S 714 1460 (894 52)
Flaked Tech	3050					369,000	S 804 1420 387,450 00	C 155 6740 (387,450 00)
P Tech	3000	1 000	1 000		369,000		C 155 6810 372,690 00	S 702 1420 (372,690 00)
3#	3200					28,680	S 802 1420 163,014 80	C 161 6740 (163,014 80)
P Tech	3000	3 2159	3 2554		86,653		C 161 6810 87,721 53	S 702 1420 (87,721 53)
Isoph	40500	2 2500	2 2186	59,219			C 161 5680 33,162 64	S 717 1460 (33,162 64)
MO	40400						C 161 5660	S 716 1460
Emul	40600	0 0143					C 161 5670	S 718 1460
Aromatic B	40800	1 8120	1 8132	48,377			C 161 5685 7,256 59	S 719 1460 (7,256 55)
Amul	40900	1 2683	1 3373	35,679			C 161 5675 27,118 04	S 720 1460 (27,118 04)
Sun Oil	41640	0 4300	0 4457	11,890			C 161 5650 1,902 40	S 769 1460 (1,902 40)
Tenneco 500	45320						C 161 5685	S 797 1460
Cone Blend								
Stepfac								
4#	3300					32,676	S 817 1420 228,405 24	C 162 6740 (228,405 24)
P Tech	3000	4 1500	4 1500		135,606		C 162 6810 138,981 05	S 702 1420 (138,981 05)
F Tech	3050						C 162 6835	S 804 1420
Isoph	40500	0 7200	0 7438	24,306			C 162 5680 13,611 36	S 717 1460 (13,611 36)
M O	40400	2 7400	2 9712	97,087			C 162 5660 57,281 33	S 716 1460 (57,281 33)
Emul	40600	0 8250	0 8250	30,225			C 162 5670 21,157 50	S 718 1460 (21,157 50)
Isoph/Mbk	41080						C 162 5780	S 721 1460
Aromatic B	40800						C 162 5685	S 719 1460
Amul	40900						C 162 5675	S 720 1460
4# X	3300						S 817 1420	C 162 6740
P Tech	3000	4 1270					C 162 6810	S 702 1420
M O	40400	1 7620					C 162 5680	S 716 1460
Isoph	40500	1 6880					C 162 5680	S 717 1460
Emul	40600	0 7820					C 162 5670	S 718 1460
Aromatic B	40800	0 0503					C 162 5685	S 719 1460
Amul	40900	0 3944					C 162 5675	S 720 1460
Sun Oil	41640	0 3041					C 162 5650	S 769 1460
Stam	3400					103,924	S 811 1420 759,684 44	C 170 6740 (759,684 44)
P Tech	3000	4 1270	4 1270		428,894		C 170 6810 433,182 94	S 702 1420 (433,182 94)
F Tech	3050						C 170 6835	S 804 1420
Isoph/Mbk	41080	3 9280	3 9280	408,213			C 170 5780 212,270 76	S 721 1460 (212,270 76)
Emul	40600	0 9030	0 9030	93,643			C 170 5670 65,690 10	S 716 1460 (65,690 10)
Isoph	40500						C 170 5660	S 717 1460
MO	40400						C 170 5660	S 716 1460

Item Descript	Item No	Total Qty's										
		R/M's	F/G's									
Propanil Tech	3000											
Flake Tech	3050											
Isoph	40500		83,525									
Emul	40600		124,068									
Armud	40900		35,679									
M O	40400		97,087									
Aromatic B	40800		48,377									
Isoph/Mibk	41080		408,213									
Sun Od	41640		11,890									
Terneco 500	45320											
# Packaged:	Item No			Mt Drms	Bulk	Full Drms						
# 50L	3180	13 210					S	854	1420		C	167 6740
# 55's	3210	55 000					S	806	1420			
# 200L's	3250	52 840					S	807	1420			
# 35's	10010	35 000					S	838	1420			
Propanil 360 210L's	10020	55 480					S	826	1420			
Propanil 360 200L's	10030	52 840					S	825	1420			
Supernox 360 200L	10040	52 840					S	830	1420			
# Bulk	3200						C	167	6820		S	802 1420
# 20L Used	3220										S	819 1420
# 200L Used	3250										S	807 1420
35's	42210						C	1087	5890		S	738 1480
55M's	42300										S	742 1480
55 M's Black	42560										S	756 1460
# 20L	3220	5,280				4,873	S	819	1420	174,835 25	C	160 6740 (174,835 25)
# Bulk	3200		25,729		25,731		C	160	6820	157,216 41	S	802 1420 (157,216 41)
Mt 20L	42000			4,873			C	1080	5890	19,248 35	S	739 1460 (19,248 35)
4# Packaged:	Item No			Mt Drms	Bulk	Full Drms						
Propanex 500	3280						S	829	1420		C	169 6740
Propanil 4# 20L	3290	5 280					S	812	1420			
4# 55's	3310	55 000					S	818	1420			
Propanil 4# 210L	3320	55 480					S	836	1420			
Propanil 4# 200L	3330	52 840					S	839	1420			
Cedar Blue Drum 35 gal	3340	35 000					S	814	1420			
Propanex 35	4310	35 000					S	814	1420			
Supernox 480 200L	10050	52 840					S	835	1420			
4# bulk	3300						C	169	6830		S	817 1420
35 m's	42210						C	1069	5890		S	738 1480
Mt 20L	42000										S	739 1460
35 m's Plastic	42230										S	793 1460
55 m's	42300										S	742 1460
55 m's	42560										S	756 1460
Stam Packaged:	Item No			Mt Drms	Bulk Used	Full Drms						
Stam 35's	3420	35 000				2,816	S	813	1420	769,314 00	C	172 6740 (769,314 00)
bulk	3400		98,630		98,630		C	172	6825	720,985 30	S	811 1420 (720,985 30)
35 m's	42220			2,816			C	1072	5890	42,270 00	S	780 1460 (42,270 00)
Duron Prod'n:	Item No	Std	Act	R/M Used		F/G Prod						
Duron Standard Grade	3030					183,661	S	816	1420	510,577 58	C	157 6740 (510,577 58)
Duron B Grade	3040						S	844	1420			
DCPI	40150	0 8340	0 7830	143,800			C	157	5635	339,368 00	S	715 1480 (339,368 00)
DMA	41650	0 2100	0 1950	35,815			C	157	5610	22,921 60	S	744 1460 (22,921 60)
Heptane	41660	0 0716	0 0332	6,104			C	157	5650	1,281 84	S	745 1480 (1,281 84)
Sulfuric Acid	41520										S	762 1480
50% Rayon Caustic	45090										S	792 1460
Ethaphon Prod'n:	Item No	Std	Act	R/M Used		F/G Prod						
Ethaphon	15740					100% AI	S	851	1420		C	187 6740
Ethylene Oxide	46210	1 1860					C	187	5715		S	822 1460
Phosphorus Trichloride	46220	1 2420					C	187	5725		S	823 1460
Anhydrous Hydr Chloride	46200	0 8500					C	187	5735		S	821 1460
Sulfuric Acid	41010	1 0670					C	187	5630		S	704 1460
50% Caustic	41530	1 1890					C	187	5650		S	783 1460

Acfluorfen Prod'n:	Item No	Std	Act	R/M Used	F/G Prod						
Acifluorfen	5120				151,628	100% AI					
Mixed Nitrating Acid	41700						C	182	5850	75,712.24	S 806 1460
Perkone D	41740	0 1200	0.2984	44,840							S 828 1460
Acetic Anhydride	41710	0 7200	0 7856	120,642							S 807 1460
Sulfuric Acid	41010	0.2400	0 1471	22,310			C	182	5530	892.40	S 704 1460
Nitric Acid	41020	0 2600	0 3105	47,074			C	182	5540	7,531.84	S 705 1460
PCE		0.3220									
Ethylene Dichloride	41720										S 808 1460
50% Caustic	41530	1 2000	1 2397	187,876							S 763 1460
Rock Salt	45350										S 801 1460
R118118	90200	3 5400	3.4284	520,000							
TA Prod'n:	Item No	Std	Act	R/M Used	F/G Prod						
TA Prod'n:	17000						S	849	1420		C 183 6740
Nitromethane	42680	7600					C	183	5580		S 787 1460
Formaldehyde	41540	2 5000					C	183	5580		S 764 1460
Methanol	42640	2460					C	183	5850		S 735 1460
Sulfuric Acid	41520	0660									S 762 1460
Raney Nickel	42690	0110					C	183	5600		S 788 1460
Hydrogen	41030	1420					C	183	5570		S 708 1460
50% Caustic	41530	1000									S 762 1460
FA/C 5-Nitro Prod'd:	Item No	Std	Act	R/M Used	F/G Prod						
5-Nitro	90800		4 9418	168,104	34,017	100% AI					
Step 3	90810										
Step 4	90820										
Step 5	90830										
Calcium Chloride	90630										
Chlorine	90720		0 3554	12,091							
A Sulfate	90710		1.4837	50,470							
G Acid	90700		0 4502	15,314							
50% Caustic	45080		0 7349	25,000			S	8000	1230	2,000.00	S 792 1460
20% Oleum	90770		4 3858	148,504							
Methanol	90790		0 8555	32,502							
Soda Ash	90740		0 1784	6,000							
Toluene	90760		4.0582	138,049							
93% Sulfuric Acid	90750		1 7891	61,200							
Mixed Acid	90730		0.3475	11,820							
CYMP Prod'd:	Item No	Std	Act	R/M Used	F/G Prod						
CYMP	5110					100% AI					
DICHL	90840										
IPA	90850										
50% Caustic	41530						S	9000	1230		S 763 1460
Catalyst	90870										
Hydrogen	41030						C	190	5570		S 706 1460
Hcl	90860										
DoverPhos Prod'd:	Item No	Std	Act	R/M Used	F/G Prod						
DoverPhos	5150				28,720						
Therminol	90900										
TTP	90910			64,421							
2,4 DCP	90920			83,383							
Methanol	90930										
Xylene	90940										
PE	90950			14,070							
Phenol	90960			40,435							
Caustic	90970			160							
Packaged Plant:	Item No	Std	Act	R/M's	F/G's	Cases	Gals/Lbs				
Pure Trom 25 Kg Pkg'd	17120							C	183	6740	S 843 1420
Tromethamine Bulk Used	17000							C	183	6860	S 849 1420
Trometamol 25 Kg	17220							S	845	1420	C 181 6740
Trometamol 50 Kg	17240							C	181	6740	S 847 1420
Tris Ultra Pure 100Kg	17250							C	181	6740	S 853 1420
Pure Tris-Hcl 100Kg	17280							C	181	6740	S 855 1420
Tromethamine Bulk Used	17000							C	181	6860	S 849 1420

Wham Packaged:	Item No	Std	Act	R/M's	F/G's	Cases	Gals/Lbs						
Wham 2x2 5	3180							S	832	1420		C	164 6740 (748,865 74)
Wham 100L	3230							S	828	1420			
Wham 30	3240							S	805	1420			
S Wham 30	3350					2,845	85,350	S	831	1420	629,883 00		
S Wham 2x2 5's	3360							S	834	1420			
S Wham Bulk	3370						17,359	S	856	1420	119,082 74		
S Wham 2x2 5's Used	3360							C	164	6835		S	834 1420
Flaked Tech	3050	4 1240	5.0823		522,000			C	164	6835	548,100 00	S	804 1420 (548,100 00)
Morwet	41460	0 0970	0 2112	21,690				C	164	5850	205,597 52	S	726 1460 (23,425 20)
Polyfon O	41470	0 0100	0 0059	609								S	727 1460 (377 58)
Glycerine	41480	0 2430	0 2965	30,450								S	728 1460 (13,702 50)
Alfonic	41490	0 3890										S	729 1460
Kelzan	41510	0.0050	0 0110	1,131								S	761 1460 (5,994 30)
Veegum	41570	0.1170	0 2342	24,050								S	731 1460 (44,492 50)
Antifoam DC 1500	45140	0 0010	0.0088	899								S	785 1460 (5,663 70)
Technical Cerbyl	41670	0 0070	0.0085	870								S	757 1460 (3,262 50)
Ethephon	41680	0 0400	0 0058	580								S	791 1460 (1,954 60)
Soprophor 4D384	41690	0 1460	0.5557	57,072								S	809 1460 (108,724 64)
Proxel	41730											S	825 1460
Formaldehyde												S	767 1460
Citric Acid	41590											S	752 1460
30 m's	42100			2,845				C	164	5870	45,093 25	S	759 1460 (45,093 25)
2 5 m's	44200											S	759 1460
Dust Packaged:	Item No	Std	Act	R/M's	F/G's	Cases/Drums	Gals/Lbs						
Dust 30	3430					2,084	62,520	S	823	1420	458,271 60	C	159 6740 (458,271 60)
Flaked Tech	3050		5.2687		329,400			C	159	6835	345,870.00	S	804 1420 (345,870 00)
Veegum	41570		0 2418	15,120				C	159	5850	148,684 82	S	731 1460 (27,872 00)
Glycerine	41480		0 3109	18,440								S	728 1460 (8,748.00)
Soprophor	41690		0 5701	35,640								S	809 1460 (88,848 80)
Morwet	41460		0 2159	13,500								S	726 1460 (14,580 00)
Polyfon O	41470		0 0060	378								S	727 1460 (234 36)
Ethephon	41680		0 0058	360								S	791 1460 (1,213 20)
Proxel	41730		0 0626	3,913								S	825 1460 (20,034 56)
Formaldehyde			0 0109	675								S	785 1460 (3,515 40)
Antifoam	45140		0 0089	558								S	785 1460
Bensulfuron Methyl Tech			0 0406	2,538								S	761 1460 (3,720 60)
Kelzan	41510		0 0112	702								S	752 1460 (33,031 40)
30 m's	42100			2,084				C	159	5870	33,031 40	S	752 1460
Total Flaked Tech Used	3050				851,400								
Flake Tech Packaged:	Item No	Std	Act	R/M's	F/G's	Cases	Gals/Lbs						
Flake Tech 25Kg	3060					1,360	74,836	S	822	1420	93,918 08	C	155 6740 (93,918.08)
Flake Tech Used	3060		0.9982		74,800			C	155	6835	78,540 00	S	804 1420 (78,540.00)
Duron Col Packaged:	Item No	Std	Act	R/M's	F/G's	Cases	Gals/Lbs						
Duron Col 224 Kg	3070							S	848	1420		C	158 6740
Duron	3030	5820						C	158	6885		S	816 1420
Arquad 18/29	45100	0850						C	158	5850		S	781 1460
Arquad 2C75	45120	0200										S	783 1460
Ingalite Blue Dye	45130	0020										S	784 1460
DC 1500 Antifoam	45140	0010										S	785 1460
Drum 55 Gal	45150							C	1058	5890		S	786 1460
Butox 7500 Packaged:	Item No	Std	Act	R/M's	F/G's	Cases	Gals/Lbs						
Butoxone DF 7500	15580							S	420	1420		C	420 6740
2,4 D-B Acid	41550	7650						C	420	5510		S	765 1460
Continental Clay	41620	1840						C	420	5850		S	748 1460
Hi Sol 233	41500	0050						C				S	737 1460
Stepperse DF 200	41600	.0600						C				S	740 1460
Stepwet DF 95	41610	0050						C				S	743 1460

Butex 175 Packaged:	Item No	Std	Act	R/M's	FIG's	Cases	Gals/Lbs						
Butoxone 175 4x1	15260					2,029	8,116	S	410	1420	87,652 80	C	410 8740 (87,652 80)
Butox 200 Bulk Used	15200	0 8152						C	410	6850		S	430 1420
2 4, D B Acid	41550	1 8000	1 7613	14,285				C	410	5510	66,900 60	S	765 1460 (66,900 60)
50% DMA	41580	0 8000	0 8200	6,655				C	410	5700	3,993.00	S	768 1460 (3,993 00)
Citric Acid	41590	0 2800	0 2458	1,995				C	410	5705	1,835 40	S	767 1460 (1,835 40)
Jugs	44100			8,116				C	410	5870	3,489 88	S	749 1460 (3,489 88)
Butoxone 175 2x2 5	15240					2,115	10,575	S	410	1420	114,210 00	C	410 8740 (114,210 00)
Butox 200 Bulk Used	15200	0 8152						C	410	6850		S	430 1420
2 4, D B Acid	41550	1 8000	2 0255	21,420				C	410	5510	100,245 60	S	765 1460 (100,245 60)
50% DMA	41580	0 8000	0 9447	9,890				C	410	5700	5,994 00	S	766 1460 (5,994 00)
Citric Acid	41590	0 2800	0 2609	2,970				C	410	5705	2,732 40	S	767 1460 (2,732 40)
Jugs	44200			4,230				C	410	5870	5,752 80	S	759 1460 (5,752 80)
Butoxone 175 55	15270							S	410	1420		C	410 8740
Butox 200 Bulk Used	15200	0 8152						C	410	6850		S	430 1420
2 4, D B Acid	41550	1 8000						C	410	5510		S	765 1460
60% DMA	41580	0 8000						C	410	5700		S	768 1460
Citric Acid	41590	0 2800						C	410	5705		S	767 1460
Butox 200 Packaged:	Item No	Std	Act	R/M's	FIG's	Cases	Gals/Lbs						
Butoxone 200 4x1	15560							S	430	1420		C	430 8740
Butox 200 Bulk Used	15200	1 0000						C	430	6850		S	824 1420
2 4, D B Acid	41550	2 0800						C	430	5510		S	765 1460
60% DMA	41580	1 1000						C	430	5700		S	768 1460
Citric Acid	41590	0 4200						C	430	5705		S	767 1460
Jugs-1 gal plastic	44100							C	430	5870		S	749 1460
HCC-Cordelle Cont'd													
Butoxone 200 2x2 5	15540							S	430	1420		C	430 8740
Butox 200 Bulk Used	15200	1 0000						C	430	6850		S	824 1420
2 4, D B Acid	41550	2 0800						C	430	5510		S	765 1460
60% DMA	41580	1 1000						C	430	5700		S	768 1460
Citric Acid	41590	0 4200						C	430	5705		S	767 1460
Jugs-2 5 gal plastic	44200							C	430	5870		S	759 1460
Butoxone 200 55	15570							S	430	1420		C	430 8740
Butox 200 Bulk Used	15200	1 0000						C	430	6850		S	824 1420
2 4, D B Acid	41550	2 0800						C	430	5510		S	765 1460
60% DMA	41580	1 1000						C	430	5700		S	768 1460
Citric Acid	41590	0 4200						C	430	5705		S	767 1460

Shipped from Plant:

	Item No	Location	Containers	Lbs/gals
Prop Tech	3000	4 Plant		450,900
DCA	3020	4 Plant		
Diuron	3030	4 Plant		
Flake Tech	3050	4 Plant		
Flake Tech 25KG	3060	4 Plant		
3# 50 L	3180	4 Plant		
3# Bulk	3200	4 Plant		
3# 55's	3210	4 Plant		
3# 20L	3220	4 Plant	4,375	23,118
3# 200L	3250	4 Plant		
Propanex 500 55's	3280	4 Plant		
4# 20L	3290	4 Plant		
4# Bulk	3300	4 Plant		32,676
4# 55's	3310	4 Plant		
4# 210 L	3320	4 Plant		
4# 200 L	3330	4 Plant		
4# 35's	3340	4 Plant		
Stam Bulk	3400	4 Plant		38,910
Stam 35's	3420	4 Plant	3,020	105,700
Propanol 3# 35's	10010	4 Plant		
Propanol 360 210L	10020	4 Plant		
Propanol 360 200L	10030	4 Plant		
Supernox 360 200L	10040	4 Plant		
Supernox 480 200L	10050	4 Plant		
Ethephon 100%	15740	4 Plant		
Tromethamine Bulk	17000	4 Plant		
Tham 25 KG	17020	4 Plant		
Tromethamine 25KG	17120	4 Plant		

Shipped from Plant Cont'd:

Trometamol 50KG
 Tria Ultra Pure 100Kg
 Pure Tria-Hcl 100Kg
 MO
 Isoph
 4# Emul
 Emul
 TA-40 Waste Water

Item No	Location
17240	4 Plant
17250	4 Plant
17260	4 Plant
40400	4 Plant
40500	4 Plant
40600	4 Plant
40900	4 Plant
4	4 Plant

Containers lbs/gals

Shipped from O/S Plant:

Diuron
 Diuron
 Diuron
 Diuron Cal 248 Kg
 Flaked Tech
 Flaked Tech
 Flaked Tech
 Flaked Tech 25Kg
 Flaked Tech 25Kg
 Dauron Cal 224 Kg
 Bandit 200L
 Wham! EZ 2x2 5 gal
 Wham! EZ 2x2 5 gal
 Wham 100 Liter
 Wham 30gls
 Wham 30gls
 Wham 30gls
 Wham 30gls
 Wham 30gls
 Wham 5gls
 Wham 5gls
 Wham 5gls
 4# 35
 4# 35
 4# 35
 Super Wham 30
 Super Wham 2x2 5
 Super Wham 2x2 5
 Super wham Bulk
 Stam 36
 Duet 30
 Duet 30
 Duet 30
 Propanex 35's
 Butox 200 Bulk
 Butox 175 2x2 5
 Butox 175 4x1
 Butox 200 2x2 5
 Butox 200 2x2 5

Item No	Location
3030	10 BH
3030	52 Gulf States
3030	97 In Transit
3040	86 Odom
3050	10 BH
3050	78 Odom-Pachuta
3050	86 Odom
3060	78 Odom-Pachuta
3060	86 Odom
3070	86 Odom
3140	86 Odom
3180	10 BH
3180	86 Odom
3230	86 Odom
3240	10 BH
3240	59 Rice Farmers
3240	78 Odom-Pachuta
3240	86 Odom
3240	88 Amer Rice
3260	10 BH
3260	86 Odom
3260	88 Amer Rice
3340	10 BH
3340	15 Amer Whse
3340	59 Rice Farmers
3350	10 BH
3350	15 Amer Whse
3350	59 Rice Farmers
3350	78 Odom-Pachuta
3350	86 Odom
3360	10 BH
3360	86 Odom
3370	86 Odom
3420	10 BH
3430	10 BH
3430	78 Odom-Pachuta
3430	86 Odom
4310	86 Odom
15200	57 HCC-Cordale
15240	10 BH
15240	20 Gray-Albany
15240	21 Gray-Ashburn
15240	30 AWS
15240	57 HCC-Cordale
15260	10 BH
15260	11 Casco
15260	20 Gray-Albany
15260	21 Gray-Ashburn
15260	30 AWS
15260	57 HCC-Cordale
15540	10 BH
15540	15 American W/H
15540	20 Gray-Albany
15540	21 Gray-Ashburn
15540	30 AWS
15540	35 Robertson
15540	97 HCC-Cordale

Containers lbs/gals
 92,400
 351,000
 1,120 61,712
 353 10,560
 (92) (2,760)
 2,760 82,800
 (121) (3,630)
 120 3,600
 17,356
 685 20,550
 (490) (14,700)
 (175) (5,250)
 72 360
 540 2,160
 144 720
 36 180

Shipped from O/S Plant Cont'd:

Item No	Location	Containers	lbs/gals
Butox 200 4x1	15560 10 B/H		
Butox 200 4x1	15560 15 American W/H		
Butox 200 4x1	15560 20 Gray-Albany		
Butox 200 4x1	15560 21 Gray-Ashburn		
Butox 200 4x1	15560 30 AWS		
Butox 200 4x1	15560 35 Robertson		
Butox 200 4x1	15560 57 HCC-Cordale		
Butox 7500 10x2 33	15560 10 B/H		
Butox 7500 10x2 33	15560 15 American W/H	192	4,474
Butox 7500 10x2 33	15560 20 Gray-Albany		
Butox 7500 10x2 33	15560 21 Gray-Ashburn		
Butox 7500 10x2 33	15560 86 Odom		
Butox 7500 10x2 33	15560 30 AWS		
Pluck 2x2 5	15700 20 Gray-Albany		
Pluck 2x2 5	15700 78 Odom-Pachuta		
Pluck 30	15730 10 B/H		
Pluck 30	15730 78 Odom-Pachuta		
Ethephon	15740 78 Odom-Pachuta		
Tromethamne 25Kg	17120 31 Merflex	242	13,339
Tromethamne 25Kg	17120 16 Antwerp	180	9,922
2,4 DB Acid	41550 97 In Trans		

Transfers:	Item No	From	To	Cases/Drums	Gals/Lbs
DCA	3020	4 PR	87 In Trans		
DCA	3020	4 PR	100 EMV-Hungary		318,800
DCA	3020	97 In Trans	4 PR		
Diuron	3030	4 PR	10 B/H		187,200
Diuron	3030	4 PR	86 Odom		
Diuron	3030	10 B/H	4 PR		3,600
Diuron	3030	10 B/H	86 Odom		
Diuron	3030	86 Odom	78 Odom-Pachuta		
Diuron	3030	97 In Trans	52 Gulf States		
Diuron B Grade	3040	4 PR	10 B/H		62,400
Diuron B Grade	3040	10 B/H	4 PR		1,200
Flake Tech	3050	4 PR	10 B/H		
Flake Tech	3050	4 PR	58 HCC-W/H		
Flake Tech	3050	4 PR	78 Pachuta		
Flake Tech	3050	4 PR	86 Odom		288,500
Flake Tech	3050	10 B/H	4 PR		1,500
Flake Tech	3050	10 B/H	86 Odom		357,000
Flake Tech	3050	10 B/H	58 HCC-W/H		
Flake Tech	3050	10 B/H	78 Pachuta		39,000
Flake Tech	3050	86 Odom	10 B/H		
Flake Tech	3050	86 Odom	78 Odom-Pachuta		
Flake Tech 25KG	3060	86 Odom	4 PR		
Flake Tech 25KG	3060	86 Odom	78 Odom-Pachuta		
Flake Tech 25KG	3060	4 PR	86 Odom		
Diuron Col 224 Kg	3070	86 Odom	78 Odom-Pachuta		
Bandt 200L	3140	78 Odom-Pachuta	86 Odom		
Wham 2x2 5	3180	10 B/H	4 PR		
Wham 2x2 5	3180	10 B/H	86 Odom Ind		
Wham 2x2 5	3180	86 Odom Ind	4 PR		
Wham 2x2 5	3180	86 Odom Ind	10 B/H		
3# 20L	3220	25 Platte	4 PR		
3# 20L	3220	4 PR	25 Platte		
Wham 30	3240	4 PR	86 Odom		
Wham 30	3240	4 PR	10 B/H		
Wham 30	3240	10 B/H	59 Rice Farmers		
Wham 30	3240	10 B/H	86 Odom		
Wham 30	3240	10 B/H	86 American Rice		
Wham 30	3240	59 Rice Farmers	10 B/H		
Wham 30	3240	86 Odom Ind	4 PR		
Wham 30	3240	86 Odom Ind	10 B/H		
Wham 30	3240	86 Odom Ind	59 Rice Farmers		
Wham 30	3240	86 Odom Ind	86 Amer Rice		
Wham 30	3240	86 Amer Rice	10 B/H		

Transfers Cont'd:	Item No	From	To	Cases/Drums	Gals/Lbs
Wham 5	3260	4 PR	86 Odom		
Wham 5	3260	4 PR	10 B/H		
Wham 5	3260	10 B/H	4 PR		
Wham 5	3260	10 B/H	86 Odom Ind		
Wham 5	3260	86 Odom Ind	86 American Rice		
Wham 5	3260	86 Odom Ind	10 B/H		
Wham 5	3260	86 Odom Ind	4 PR		
Wham 5	3260	88 American Rice C	10 B/H		
4# 35's	3340	4 PR	10 B/H		
4# 35's	3340	4 PR	15 American		
4# 35's	3340	4 PR	59 Rice Farmers		
4# 35's	3340	10 B/H	4 PR		
4# 35's	3340	10 B/H	15 American		
4# 35's	3340	15 American	4 PR		
4# 35's	3340	59 Rice Farmers	4 PR		
4# 35's	3340	59 Rice Farmers	10 B/H		
4# 35's	3340	88 American Rice C	4 PR		
Super Wham 30	3350	4 PR	10 B/H		
Super Wham 30	3350	10 B/H	15 Amer Whse		
Super Wham 30	3350	10 B/H	59 Rice Farmers		
Super Wham 30	3350	10 B/H	86 Odom	720	21,600
Super Wham 30	3350	15 Amer Whse	86 Odom		
Super Wham 30	3350	15 Amer Whse	10 B/H		
Super Wham 30	3350	69 Rice Farmers	10 B/H		
Super Wham 30	3350	78 Odom Pachuta	86 Odom	360	10,800
Super Wham 30	3350	86 Odom Ind	4 PR		
Super Wham 30	3350	86 Odom Ind	10 B/H	2,640	79,200
Super Wham 30	3350	86 Odom Ind	15 Amer Whse		
Super Wham 30	3350	86 Odom Ind	59 Rice Farmers		
Super Wham 2x2 5	3360	4 PR	10 B/H		
Super Wham 2x2 5	3360	4 PR	86 Odom Ind		
Super Wham 2x2 5	3360	10 B/H	4 PR		
Super Wham 2x2 5	3360	10 B/H	86 Odom Ind		
Super Wham 2x2 5	3360	78 Odom-Pachuta	86 Odom Ind		
Super Wham 2x2 5	3360	86 Odom Ind	4 PR		
Super Wham 2x2 5	3360	86 Odom Ind	10 B/H		
Super Wham 2x2 5	3360	86 Odom Ind	78 Pachuta		
Stam 35	3420	4 PR	10 B/H		
Stam 35	3420	10 B/H	4 PR		
Duet 30	3430	10 B/H	86 Odom-Waynesboro	360	10,800
Duet 30	3430	86 Odom Ind	10 B/H	2,160	64,800
Duet 30	3430	10 B/H	78 Pachuta	815	24,450
Duet 30	3430	78 Odom-Pachuta	10 B/H	480	14,400
Duet 30	3430	86 Odom Ind	78 Pachuta	640	25,200
Butox 200 Bulk	15200	97 In Transit	57 HCC Cordate		
Butox 175 2x2 5	15240	11 Cascio	10 B/H		
Butox 175 2x2 5	15240	21 Gray-Ashburn	10 B/H		
Butox 175 2x2 5	15240	21 Gray-Ashburn	20 Gray-Albany		
Butox 175 2x2 5	15240	21 Gray-Ashburn	57 HCC Cordate		
Butox 175 2x2 5	15240	21 Gray-Ashburn	30 AWS		
Butox 175 2x2 5	15240	57 HCC-Cordate	10 B/H		
Butox 175 2x2 5	15240	57 HCC-Cordate	20 Gray-Albany	782	3,960
Butox 175 2x2 5	15240	57 HCC-Cordate	21 Gray-Ashburn		
Butox 175 2x2 5	15240	57 HCC-Cordate	30 AWS		
Butox 175 4x1	15260	10 B/H	4 PR		
Butox 175 4x1	15260	10 B/H	21 Gray-Ashburn		
Butox 175 4x1	15260	20 Gray-Albany	10 B/H		
Butox 175 4x1	15260	20 Gray-Albany	21 Gray-Ashburn		
Butox 175 4x1	15260	20 Gray-Albany	30 AWS		
Butox 175 4x1	15260	21 Gray-Ashburn	10 B/H		
Butox 175 4x1	15260	21 Gray-Ashburn	11 Cascio		
Butox 175 4x1	15260	21 Gray-Ashburn	20 Gray-Albany		
Butox 175 4x1	15260	21 Gray-Ashburn	30 AWS		
Butox 175 4x1	15260	21 Gray-Ashburn	57 HCC Cordate		
Butox 175 4x1	15260	30 AWS	20 Gray-Albany		

Transfers Cont'd:	Item No	From	To	Cases/Drums	Gals/Lbs
Butox 175 4x1	15260	57 HCC-Cordata	10 B/H	360	1,440
Butox 175 4x1	15260	57 HCC-Cordata	11 Cascio	360	1,440
Butox 175 4x1	15260	57 HCC-Cordata	20 Gray-Albany		
Butox 175 4x1	15260	57 HCC-Cordata	21 Gray-Ashburn		
Butox 175 4x1	15260	57 HCC-Cordata	30 AWS		
Butox 200 2x2 5	15540	10 B/H	15 American		
Butox 200 2x2 5	15540	10 B/H	35 Robertson		
Butox 200 2x2 5	15540	10 B/H	57 HCC-Cordata		
Butox 200 2x2 5	15540	11 Cascio	10 B/H		
Butox 200 2x2 5	15540	11 Cascio	30 AWS		
Butox 200 2x2 5	15540	11 Cascio	57 HCC-Cordata		
Butox 200 2x2 5	15540	15 American	57 HCC		
Butox 200 2x2 5	15540	20 Gray-Albany	4 Pt		
Butox 200 2x2 5	15540	20 Gray-Albany	15 American		
Butox 200 2x2 5	15540	20 Gray-Albany	35 Robertson		
Butox 200 2x2 5	15540	21 Gray-Ashburn	15 American		
Butox 200 2x2 5	15540	21 Gray-Ashburn	30 AWS		
Butox 200 2x2 5	15540	21 Gray-Ashburn	35 Robertson		
Butox 200 2x2 5	15540	21 Gray-Ashburn	15 American		
Butox 200 2x2 5	15540	30 AWS	15 American		
Butox 200 2x2 5	15540	35 Robertson	15 American		
Butox 200 2x2 5	15540	57 HCC-Cordata	10 B/H		
Butox 200 2x2 5	15540	57 HCC-Cordata	15 American		
Butox 200 2x2.5	15540	57 HCC-Cordata	20 Gray-Albany		
Butox 200 2x2.5	15540	57 HCC-Cordata	21 Gray-Ashburn	576	2,680
Butox 200 2x2 5	15540	57 HCC-Cordata	30 AWS		
Butox 200 2x2 5	15540	57 HCC-Cordata	35 Robertson		
Butox 200 4x1	15560	11 Cascio	10 B/H		
Butox 200 4x1	15560	11 Cascio	35 Robertson		
Butox 200 4x1	15560	15 Amer Whse	35 Robertson		
Butox 200 4x1	15560	20 Gray-Albany	30 AWS		
Butox 200 4x1	15560	20 Gray-Albany	35 Robertson		
Butox 200 4x1	15560	21 Gray-Ashburn	30 AWS		
Butox 200 4x1	15560	57 HCC-Cordata	20 Gray-Albany		
Butox 200 4x1	15560	57 HCC-Cordata	21 Gray-Ashburn		
Butox 200 4x1	15560	57 HCC-Cordata	35 Robertson		
Butox 7500 DF 10x2 33	15580	10 B/H	15 American		
Butox 7500 DF 10x2 33	15580	15 American	10 B/H		
Butox 7500 DF 10x2 33	15580	21 Gray-Ashburn	15 American	48	1,072
Butox 7500 DF 10x2 33	15580	20 Gray-Albany	15 American	182	4,241
Butox 7500 DF 10x2 33	15580	86 Odom	10 B/H		
Butox 7500 DF 10x2 33	15580	86 Odom	21 Gray-Ashburn		
Tromethamine Bulk	17000	4 Pt	31 Meritex		
Tromethamine Bulk	17000	31 Meritex	4 Pt		
Tromethamine 25 Kg	17120	10 B/H	4 Pt		
Tromethamine 25 Kg	17120	4 Pt	31 Meritex		
Tromethamine 25 Kg	17120	4 Pt	18 Antwerp		
Tromethamine 25 Kg	17120	31 Meritex	4 Pt		
DCPI	40150	52 Gulf States	4 Pt		
DCPI	40150	97 In-Transit	52 Gulf States		
DCPI	40150	97 In-Transit	4 Pt		103,085
2,4 D-B Acid	41550	20 Gray-Albany	57 HCC-Cordata		44,092
2,4 D-B Acid	41550	21 Gray-Ashburn	57 HCC-Cordata		
2,4 D-B Acid	41550	86 Odom	10 B/H		
Hi Sil	41500	4 Plant	86 Odom-Waynesboro		2,024
Hi Sil	41500	86 Odom	10 B/H		
Stepwet	41610	86 Odom	10 B/H		
Con't Clay	41620	86 Odom	10 B/H		
Ethephon	41680	4 Pt	86 Odom-Waynesboro		
Soprophor	41690	78 Pachtuta	86 Odom-Waynesboro		
Mt 30 gallon Drums	42100	86 Odom	78 Odom-Pachtuta		520
Nitromethane	42680	10 B/H	4 Pt		
1 Gal Jug mt	44100	20 Gray-Albany	57 HCC-Cordata		
2 5 Gal Jug mt	44200	57 HCC-Cordata	78 Odom-Pachtuta		
2 5 Gal Jug mt	44200	78 Odom-Pachtuta	86 Odom-Waynesboro		

Transfers Cont'd:	Item No	From	To	Cases/Drums	Gals/Lbs
5 Gal jug mt	44200	86 Odorn	78 Odorn-Pachuta		
liquar 2C75	45120	86 Odorn	78 Odorn-Pachuta		
rgaste Blue Dye	45130	86 Odorn	78 Odorn-Pachuta		
is Gal Mt	45150	86 Odorn	78 Odorn-Pachuta		
butachlor	45200	86 Odorn	78 Odorn-Pachuta		

Raw Materials Received:

	Item No	Lbs		Item No	Gals/Lbs
DCA	3020		Cordata/Gray		
Flake Tech	3050				
P Acid	40200	679,520	60 % DMA	41580	
P Anhy	40300		Citric Acid	41590	
M O	40400	141,590	2,4 D-B Acid	41550	
Isoph/Mibk	41080	403,640	Jugs-1 gal plastic	44100	
Isoph	40500	87,080	Jugs-2 5 gal Plast	44200	
Emul	40600	132,220			
Aromatic B	40800	48,960	Odom-Waynesboro		
Amul	40900	44,160	Nadex	41810	
Mibk	41300		Stepperse	41600	
Ethephon	41680		Glycerme	41480	68,380
MCPA-IOE	40930		Alfonic	41490	
55 Crystal Litho	42550		HISI	41500	
55 m's Black	42300		Poly O	41470	
35 m's Plastic	42220	2,160	Morwet	41460	30,000
35 m's Plastic	42230	240	30 m's	42100	6,300
Cone Blend			2 5 gal jugs	44200	
Stapac			Citric Acid	41590	
50L m's			Veegum	41570	60,000
OOCB	41000	1,648,695	Continental Clay	41620	
Sulfuric Acid	41010	1,291,840	Keizan	41510	4,409
Nitric Acid	41020	642,880	DC Antifoam	45140	1760
Soda Ash	41050	10,800	Arquad	45100	
Lime	41060	30,000	Arquad 2C75	45120	
Caustic 50%	41530		Irgaste	45130	
50% Rayon Caust	45080		Sorprophor 4038-	41690	70,548
Cleaning Solution		754	55 m's		
Ethephon	41680		Proxel	41730	8,800
Platinum	41040 (In Transit)		Butachlor	45200	
Catalyst	41070	441	Ucaride	41750	22,500
Peroxide	41090	19,500	Odom-Pachuta	41680	
Hydrogen	41030	72,680	2,4 D-B Acid	41550	Albany
Methanol	42640		2.5 m's	44200	
mt 55's		491	Transit-N O		
TEPA			Ethephon	41680	
			Gray Dist		
15 gal M's			2,4 D-B Acid	41550	In Transit
Sun Oil	41840		2,4 D-B Acid	41550	68,184 Albany
Morphane	41830		DCPI	40150	
55 gal Plastic			TA		
5 m's	42000	2,592	50% Caustic	45080	
30 m's			Nitromethane	42680	
20 L m's	42000 Platt		Formaldehyde	41540	
2.5 m's	44200		Methanol	42640	
			Ransy Nickel	42690	
			Sulfuric Acid	41010	
			Sodium Bisulfide		
Duron:			DMA	42700	
Heptane	41660	40,260	Calcium Chloride		
Sulfuric Acid	41520		Caustic 50%	41530	
Anhydrous DMA	41850		Sulfuric Acid	41520	

Raw Materials Received Cont'd:	Item No	Lbs	Item No	Gals/Lbs
PMC 5-Nitro:				
Step 3	90800	116,140	Blackhawk:	
Step 4	90810		Nitromethane	42680
Step 5	90820		2.5 MT jugs	44200
Calcium Chloride	90830			
Chlorine	90720	4,000	Platt	
A Sulfate	90710	45,060	20 m's	42000
G Acid	90700	10,885		
50% Caustic	45090	95,180	Acfluorfen:	
20% Oleum	90770	79,280	50% Caustic	41530 138,460
Methanol	90790		Mixed Nitrating Ac	41700
Soda Ash	90740		Acetic Anhydride	41710
Toluene	90760	147,360	98 % Sulfonic Ac	41010
			Nitric Acid	41020 48,820
93% Sulfuric Acid	90750		Ethylene Dichlor	41720
Mixed Acid	90730	3,100	Calcium Chloride	
Spent Acid			R118116	90200 488,600
			Pertone D	41740 44,940
Ethephon:				
PCL3	46220			
Ethylene Oxide	46210		CYMP:	
Sulfuric Acid	41010		DICHL	90840
Anhydrous Hcl	46200		IPA	90850
Nitrogen			Hcl	90860
E Glycol			Catalyst	90870
Acetone				
Calcium Chloride				
Dover Phos:				
TPP	90910	80,160		
PE	90950	44,940		
DCP	90920	89,200		
Xylene	90940	100,360		
Methanol	90930	44,360		

Adjustments to Inventory (Per physical; samples; etc.):

Product	Item No	Location	Type Adj	Cases/Drums	Gals/Lbs					
Propanol Tech	3000	4 Plant	Adj-Inv			S	1054	1440	S	702 1420
Flaked Tech	3050	4 Plant	Adj-Inv			C	955	7700	S	804 1420
Flaked Tech	3050	10 B/H	Adj-Inv			C	164	6835	S	804 1420
Flaked Tech	3050	78 Odom-Pachuta	Adj-Inv			C	164	6835	S	804 1420
Flaked Tech	3050	88 Odom	Adj-Inv			C	164	6835	S	804 1420
Flaked Tech 25 Kg	3060	4 Plant	Adj-Inv			C	955	7700	S	822 1420
Flaked Tech 25 Kg	3060	88 Odom	Adj-Inv			C	3055	5100	S	822 1420
Duron Std Grade	3030	4 Plant	Adj-Inv		(128,400)	C	3057	5100	S	816 1420 (356,952.00)
Duron B Grade	3040	4 Plant	Adj-Inv		128,400	C	3057	5100	S	844 1420 (356,952.00)
Duron	3030	97 In Transit	Adj Inv To Quantity Shipped to Customer			C	3057	5100	S	816 1420
Duron Col 224 Kg	3070	88 Odom	Adj to Physical			C	3058	5100	S	848 1420
Wham 2x2.5	3180	10 B/H	Adj to Physical			C	3084	5100	S	832 1420
Wham 2x2.5	3180	88 Odom	Adj to Physical			C	3084	5100	S	832 1420
38 20 L	3220	25 Platt	Leaker			C	3067	5100	S	819 1420
38 Propanol 200L	3250	4 Plant	Label Change			C	3067	5100	S	807 1420
Wham 5	3260	4 Plant	Adj-Inv			C	3084	5100	S	808 1420
Wham 5	3260	10 B/H	Adj-Inv			C	3084	5100	S	808 1420
Wham 5	3260	88 Odom	Prod Complaint			C	3084	5170	S	808 1420
Propanex 500	3280	4 Plant	Label Change			C	3042	5100	S	829 1420
48 Bulk	3300	4 Plant	Adj-Inv			C	3069	5100	S	817 1420
48 35	3340	4 Plant	Donation			C	3069	5100	S	814 1420
48 35	3340	15 American	Adj-Inv			C	3069	5100	S	814 1420
48 65's	3310	4 Plant	Label Change			C	3089	5100	S	818 1420
48 210L	3320	4 Plant	Adj-Inv			C	3069	5100	S	836 1420
Super Wham 30 g	3350	15 American	Adj-Inv			C	3084	5100	S	831 1420
Super Wham 30 g	3350	88 Odom	Adj-Inv			C	3084	5100	S	831 1420
Prop Tech	3000	4 Plant	Melted F Tech			C	155	6810	S	702 1420

Adjustments to Inventory Conf'd(Per physical; samples; etc.):

Adjustment	Item No	Location	Type Adj	Cases/Drums	Gals/Lbs			
Flake Tech	3050	4 Plant	Melted F Tech			S	804	1420
Flake Tech	3050	88 Odom-Waynesboro	Adj to Physical			C	164	6835
Flaked Tech 25 Kg	3060	88 Odom-Waynesboro	Adj to Physical			C	3055	5100
Aham 2x2 5	3180	10 B/H	Adj to Physical			C	3064	5100
Aham 30	3240	10 B/H	Samples			C	964	7700
Aham 30	3240	88 Odom-Waynesboro	Samples			C	964	7700
Prop 4# 210 L	3320	4 Plant	Adj-Inv			C	3069	5100
# 35's	3340	4 Plant	Adj-Inv			C	3069	5100
# 35's	3340	10 B/H	Adj-Inv			C	3069	5100
Super Wham 30	3360	10 B/H	Adj to Physical			C	3064	5100
Super Wham 2x2 5	3360	88 Odom-Waynesboro	Adj-Inv			C	964	7700
Super Wham 2x2 5	3360	10 B/H	Adj-Inv			C	3064	5100
Super Wham 2x2 5	3360	88 Odom	Samples			C	964	7700
Propand 360 210L	10020	4 Plant	Repackage			C	3067	5100
Propand 360 200L	10030	4 Plant	Label Change			C	3067	5100
Butox 175 2x2 5	15240	57 HCC-Cordate	Inv Adj			C	410	5100
Butox 175 2x2 5	15240	10 B/H	Inv Adj			C	410	5100
Butox 175 2x2 5	15240	20 Gray-Albany	Inv Adj			C	410	5100
Butox 175 4x1	15260	11 Casco	Samples			C	410	7700
Butox 175 4x1	15260	20 Gray-Albany	Inv Adj			C	410	5100
Butox 200 2x2 5	15540	57 HCC-Cordate	Inv Adj			C	430	5100
Butox 200 2x2.5	15540	15 American	Inv Adj			C	430	5100
Butox 200 4x1	15560	57 HCC-Cordate	Inv Adj			C	430	5100
Butox 7500 DF 10x2.33	15580	20 Gray-Albany	Inv Adj			C	420	5100
Butox 7500 DF 10x2 33	15580	10 B/H	Samples			C	420	7700
Ethephon	15740	21 Gray-Ashburn	Set Up Fresh Goods			C	187	6740
Ethephon	15740	78 Odom-Pachuta	Set Up Finish Goods					
Tromethamine Bulk	17000	4 Plant	Adj-Inv			C	163	6740
Tromethamine 25 Kg	17120	4 Plant	Adj-Inv			C	3683	5100
Trometamol 50 Kg	17240	4 Plant	Adj-Inv			C	3683	5100
Tro Ultra Pure 100Kg	17250	4 Plant	Adj-Inv			C	3683	5100
DCPI	40150	97 In Transit	Adj to Physical			C	157	5635
Dowfax	40700	88 Odom-Waynesboro	Adj to Physical			C	164	5850
Arnul Emulsifier	40900	78 Odom-Pachuta	Adj to Physical			C	168	5675
TM-2 Emulsifier	40910	4 Plant	Adj to Physical			C	151	6400
Poly Solv	40920	4 Plant	Adj to Physical			C	151	6400
Soda Ash	41050	4 Plant	Sold			C	151	6400
Morwet	41460	88 Odom-Waynesboro	Adj to Physical			C	164	5850
Polyfon O	41470	88 Odom-Waynesboro	Adj to Physical			C	164	5850
Glycerine	41480	88 Odom-Waynesboro	Adj to Physical			C	164	5850
Afonic	41490	88 Odom-Waynesboro	Adj to Physical			C	164	5850
Kelzan	41510	88 Odom-Waynesboro	Adj to Physical			C	164	5850
50% Caustic	41530	4 Plant	Adj Inv			C	151	6400
Formaldehyde	41540	4 Plant	Used out of Warnings Stock			S	8900	1230
2,4 D-B Acid	41550	88 Odom-Waynesboro	Adj to Physical			C	410	7700
Veegum	41570	88 Odom-Waynesboro	Adj to Physical			C	164	5850
60% DMA	41580	57 HCC-Cordate	Adj to Physical			C	410	5700
Citric Acid	41590	88 Odom-Waynesboro	Adj to Physical			C	164	5850
Morpholine	41630	4 Plant	Adj-Water Treatment			C	151	6400
Carbaryl Tech	41670	88 Odom-Waynesboro	Adj to Physical			C	164	5850
Ethephon	41680	21 Gray-Ashburn	Set Up Finish Good					
Ethephon	41680	78 Odom-Pachuta	Set Up Finish Good			C	187	5910
Ethephon	41680	88 Odom-Waynesboro	Adj-Inv			C	196	5710
Soprophor	41690	88 Odom-Waynesboro	Samples			C	164	5850
Drums 30 plastic	42100	88 Odom-Waynesboro	Adj to Physical			C	164	5870
35 mt's	42210	4 Plant	Adj-Inv			C	1089	5890
55 mt black	42300	78 Odom-Pachuta	Adj to Physical			C	1058	5890
55 mt Crystal	42550	4 Plant	Adj-Inv			S	4	1230
Methanol	42640	4 Plant	Adj-Inv FMC			C	198	6400
MeL	42670	4 Plant	Adj-Inv			C	151	6400
Sodium Hypo	42610	4 Plant	Sent to Ponds			C	151	6400
Hydroxamine Sulfate	42850	4 Plant	Adj to Physical			C	151	6400
Jugs 1	44100	57 HCC-Cordate	Adj-Inv			C	430	5870
Jugs 2.5	44200	88 Odom-Waynesboro	Adj to Physical			C	164	5870

Adjustments to Inventory Conf'd(Per physical; samples; etc.):

Product	Item No	Location	Type Adj	Cases/Drums	Gals/Lbs				
ugs 2 5	44200	78 Odom-Pachuta	Adj to Physical			C	164	5870	S 759 1460
ntifoam AF 1500	45000	4 Plant	Transfer to Wining Stock			S	8900	1230	S 770 1460
IMPA	45020	4 Plant	Transfer to Wining Stock			S	8900	1230	S 772 1460
IMS	45030	4 Plant	Used out of Wining Stock			S	8900	1230	S 773 1460
Metacure T-1	45040	4 Plant	Transfer to Cedar Stock			S	8900	1230	S 774 1460
0% Rayon Caustic	45080	4 Plant	Transfer to Cedar Stock			S	8900	1230	S 779 1460
0% Rayon Caustic	45090	4 Plant	Used in Ponds			C	2251	6400	S 792 1460
0% Rayon Caustic	45090	4 Plant	Adj to Physical			C	151	6400	S 782 1460
urquad	45100	88 Odom-Waynesboro	Adj to Physical			C	158	5850	S 781 1460
urquar	45120	88 Odom-Waynesboro	Adj to Physical			C	158	5850	S 783 1460
rgaite Blue	45130	88 Odom-Waynesboro	Adj to Physical			C	158	5850	S 784 1460
XC 1500 Antifoam	45140	88 Odom-Waynesboro	Samples			C	164	5850	S 785 1460
5 mt	45150	88 Odom-Waynesboro	Adj to Physical			C	1058	5890	S 786 1460
ans 5 gal mt's	42000	4 Plant	Adj to Physical			C	151	6400	S 739 1460

Misc Activity:

					Lbs/Gls				
JCA Shipped for conversion to OCPI									
JCA	3020	4 Plant							
JCPI Conversion									
JCPI	40150	97 In-Transit	Purchased			S	2	1440	S 715 1460
JCA	3020	97 In-Transit	Used			S	2	1440	S 701 1420
Matinum Purchased									
Matinum	41040	97 In-Transit							
AG Purchased									
Autox 200 Bulk	15200	97 In-Transit	Purchased			S	430	1420	C 430 6740
Juron	3030	97 In-Transit	Purchased			S	816	1420	C 157 6740
JCA	3020	100 EMV-Hungary	Purchased						
JCA	3020	97 In-Transit	Purchased			C	153	5910	S 701 1420
JCA	3020	97 In-Transit	Used			C	157	5910	S 701 1420
JCA	3020	97 In-Transit	Sold			C	3653	5100	S 701 1420
JCA Returned to Westrade									
JCA	3020	4 Plant	Purchased			S	710	1420	C 153 6740
JCA	3020	97 In Transi	Purchased from Bayer			S	710	1420	C 153 6740
Jake Tech	3050	4 Plant	Purchased			S	804	1420	C 155 6740
AG Purchased									
Ethephon	15740	97 In-Transit	Purchased			S	851	1420	C 187 6740
AG Purchased									
Ins Ultr Pure 100 Kg	17250	4 Plant	Purchased			S	853	1420	C 181 6740
Pure Trns Hcl 100 Kg	17280	4 Plant	Purchased			S	856	1420	C 181 6740
JCCB Purchased	41000	97 In Transi							
JCCB Used	41000	97 In Transi				S	2	1440	S 703 1460
Cone Solvents									
Isophorone Purchased	40500	32 Cone Solvents	Purchased						

Item	PRODUCE		Prod No	SOLD		Prod No	Year-To-Date Contracts					
	Drums	lbs/gls		Drums	lbs/gls							
rMP	5110		73			590	4,230					
siluriten 100% AI	5120	151,627	88		151,627	583	542,722					
FG	5250		74			576						
overPhos	5150	28,720	72		28,720	589	38,180					
4C 5-Nitro	5280	34,017	70		34,017	580	103,325					
17000			87									
1 25 Kg	17020											
ure Tromethamine 25Kg	17120			422	23,261							(87,692.61)
ure Tromethamine 50Kg	17230											
Tromethamine Total					23,261	588						
rometamol 25 Kg	17220											
rometamol 50 Kg	17240											
le Ultra Pure 100 Kg	17250											
ure Triis Hcl 100 Kg	17260											
Trometamol Total			85			581						
Tech	3000	1,500,572	20		450,900	554						
CA	3020	1,388,829	10			553						
uron	3030	183,681			92,400							
uron B Grade	3040											
Total Diuron		183,681	11		92,400	557						
Diuron Col 224 Kg	3070		12			558						
taok Tech 25 Kg	3060	1,380		1,120	61,712							(78,991.38)
aked Tech	3050		21		351,000							(368,550.00)
Total Flake Tech					412,712	555						
ropantl 360-200L	10030											
ropantl 360 35 gl	10010											
ropantl 360 210L	10020											
upermax 360 200L	10040											
# bulk	3200	26,680	23									
# 50 L	3190											
# 20L	3220	4,873		4,375	23,118							(156,987.83)
# 200L	3250											
# 55	3210											
# Total					23,118	567						
Aham 2x2 5	3180											
Aham 5	3260											
Aham 100L	3230											
Aham 30	3240			261	7,830							(57,785.40)
Super Wham Bulk	3370	17,359			17,356							(119,062.16)
Super Wham 2x2 5	3360											
Super Wham 30	3350	2,845		2,759	82,770							(610,842.60)
Wham Sub-Total		102,709	25		107,858	564						
Duet 30	3430	2,084		20	600							(4,398.00)
Duet Total		62,520	59		600	559						
Stam bulk	3400	103,824	32		38,910							(269,612.10)
Stam 35	3420	2,818		3,020	105,700							(824,450.00)
Stam Total					142,610	572						
# bulk	3300	32,676	24		32,676							(228,405.24)
Propanex 500 55	3280											
# 20 L	3290											
# 55	3310											
# 210 L	3320											
# 200 L	3330											
# 35	3340											
Propanex 35	4310											
Supermax 480 200L	10050											
Prop 4# Domestic Sales					32,676	569						

Item No	PRODUCE		Prod No	SOLD		Prod No								
	Drums	lbs/gls		Drums	lbs/gls									
Butoxone 175 4x1	15260	2,029	8,116	540	2,160		C	410	5100	27,216.00	S	410	1420	(27,216.00)
Butoxone 175 2x2 5	15240	2,115	10,575	72	360									
175 Total			18,691	51	2,520	591								
Butoxone 200 2x2 5	15540			180	900		C	430	5100	11,052.00	S	430	1420	(11,052.00)
Butoxone 200 4x1	15560													
200 Total					900	594								
Ethephon 100% AI	15740					595	C	3687	5100		S	851	1420	
Butox 7500 10x2 33	15580			182	1,920	592	C	420	5100	26,208.00	S	850	1420	(26,208.00)
KWH					1,532,080	101								
Total										3,583,724.30				(3,583,724.30)

Fresh Goods Standards.

Product	Item No	Unit	Per Unit	
Propanil Tech Bulk	3000	lbs	1 01	
DCA-Cedar	3020	lbs	1.02	
Diuron	3030	lbs	2.78	
Diuron B Grade	3040	lbs	2 78	
Flaked Tech	3050	lbs	1 05	
Flaked Tech 25Kg	3060	lbs	1 28	
Diuron Col 224 Kg	3070	lbs	1 88	
55% Blend	3100	lbs	1 01	
Bandit 200L	3140	gls	13 75	
Wham DF (80%) 40#	3150	lbs		1 70
Wham EZ 2x2 5 Gal	3180	gls	7 38	
3# 50 Liter	3190	gls	6 79	
Propanil 3# bulk	3200	gls	6 11	
Propanil 3# 55 gal	3210	gls	6 79	
Propanil 3# 20L	3220	gls	6 79	
Wham 100 Liter	3230	gls	7 38	
Wham 30 gal	3240	gls	7 38	
Propanil 3# 200L	3250	gls	6 79	
Wham 5 gal	3260	gls	7 38	
Wham 80% 50#	3270	lbs		1 70
Propanex 500 55 Gal	3280	gls	7 75	
Propanil 4# 20L	3290	gls	7 75	
Propanil 4# Bulk	3300	gls	6 99	
Propanil 4# 55 gal	3310	gls	7 75	
Propanil 4# 210 L	3320	gls	7 75	
Propanil 4# 200L	3330	gls	7 75	
Propanil 4# 35 gal	3340	gls	7 75	
Super WhamI 30 gal	3350	gls	7 38	
Super WhamI 2x2 5 Gal	3360	gls	7 38	
Super Wham Bulk	3370	gls	6 86	
Stam Bulk	3400	gls	7 31	
Stam 35 gal	3420	gls	7 80	
Duet	3430	gls	7 33	
Propanex 35 gal	4310	gls	7 75	
Trsamino Alcohol	5340	lbs	3 77	
Propanil 360 35 gal	10010	gls	6 79	
Propanil 360 210 L	10020	gls	6 79	
Propanil 360 200 L	10030	gls	6 79	
Supernox 360 200 L	10040	gls	6 79	
Supernox 480 200 L	10050	gls	7 75	
Butox 200 Bulk	15200	gls	10 25	
Butox 175	15240/15260	gls	10 80	
Butox 200	5530/15540/1556	gls	12 28	
Butozone 7500 DF	15580	Bag	13.65	
Phuck 2x2 5	15700	gls	22 87	
Phuck 4x1	15710	gls	22 87	
Phuck Bulk	15720	gls	23 11	
Phuck 30	15730	gls	22 87	
Ethephon	15740	lbs	1 24	
Tromethamine Bulk	17000	lbs	3 77	
Tham 25 Kg	17020	lbs	3 77	
Pure Tromethamine 25 Kg	17120	lbs	3 77	
Tromethamol 25 Kg	17220	lbs	8.39	
Pure Tromethamine 50 Kg	17230	lbs	3 77	
Tromethamol 50 Kg	17240	lbs	8 39	
Tns Ultra Pure 100 Kg	17250	lbs	8 22	
Pure Tns-Hcl 100 Kg	17260	lbs	22 50	
Tns Ultra Pure 25 Kg	17270	lbs	10 45	

R/M's Standard Product	Item No	Unit	Per Unit
DCA	40100	lbs	1 05
DCPI	40150	lbs	2 36
P Acid	40200	lbs	28
P Anhydr	40300	lbs	.92
MO	40400	lbs	59
Isophor	40500	lbs	58
Emul	40600	lbs	70
Dowfax 3B2	40700	lbs	7 52
Tenn 500	40800	lbs	15
Armul	40900	lbs	.78
TM-2 Emulsifier	40910	lbs	1 65
PolySolv	40920	lbs	.71
MCPA-KOE	40930	lbs	1 78
QDCB	41000	lbs	.37
Sulfuric Acid	41010	lbs	.04
Nitric Acid	41020	lbs	.16
Hydrogen	41030	lbs	1 20
Platinum	41040	tr ozs	393 00
Soda Ash	41050	lbs	.13
Lime	41060	lbs	.07
Plat Cat	41070	lbs	88 00
Isoph/Mibk	41080	lbs	.52
Hydrogen Peroxide	41090	lbs	.34
Xylene (Cedar)	41200	lbs	.19
Mibk	41300	lbs	.47
Vangel	41450	lbs	1 37
Morewet	41460	lbs	1 08
Polyfon	41470	lbs	.62
Glycer	41480	lbs	.45
Alkonic	41490	lbs	.78
Hi Sol	41500	lbs	.83
Ketjen	41510	lbs	5 30
Sulfuric Acid 93%	41520	lbs	.04
Caustic 50%	41530	lbs	.08
Formaldehyde	41540	lbs	.11
2,4 D-B Acid	41550	lbs	4 68
Carbon Bisulfide	41560	lbs	.28
Veegum	41570	lbs	1 85
60% DMA	41580	lbs	.60
Citric Acid	41590	lbs	.92
Step-spense DF 200	41600	lbs	1 27
Stepwet DF 85	41610	lbs	2 48
Continental Clay	41620	lbs	.08
Morpholine	41630	lbs	1 06
Sun 7N Od	41640	lbs	.18
Anhydrous DMA	41650	lbs	.64
High Ourity Heptane	41660	lbs	.21
Technical Carbyl	41670	lbs	3 75
Ethephon	41680	lbs	3 37
Sorprophor 4d384	41690	lbs	1 87
Mixed Nitrating Acid	41700	lbs	.11
Aceto Anhydride	41710	lbs	.38
Ethylene Dichloride	41720	lbs	.22
Proxel QXL	41730	lbs	5 12
Perkone D	41740	lbs	.33
5 gal/20 L Pts	42000	ea	3 85
30 Mts	42100	ea	15 85
Stam 35	42200	ea	17 90
35 m's	42210	ea	19 50
35 m's Plastic/Stam	42220	ea	15 00
35 m's Plastic/Prop	42230	ea	15 00
55 m's	42300	ea	22 05
55 m's Plastic	42500	ea	22 50
55 m's Crystal Litho	42550	ea	21 60
MTPO Drums	42600	ea	25 55

Product	Item No	Unit	Per Unit
Sodium Hypo	42810	lbs	06
Caustic 30%	42620	lbs	.07
Methal Mercaptan	42630	lbs	78
Methanol 99%	42640	lbs	13
Hydroxamine Sulfate	42650	lbs	1 00
Caustic 17%	42660	lbs	03
Hydrochloric Acid	42670	lbs	05
Nitromethane 99 5%	42680	lbs	1 38
Nickel Catalyst	42690	lbs	7 63
DMA 40% Solution	42700	lbs	47
Unpacks	44000	ea	2 88
Jugs-1 Gal Plastic	44100	ea	43
Jugs-2 5 Gal Plastic	44200	ea	1 36
Antifoam AF 9000	45000	lbs	9.60
Acetone	45010	lbs	35
Dimethylpropionic	45020	lbs	2 63
Glycerol Monostearate	45030	lbs	71
Miscature T-1 Catalyst	45040	lbs	12 28
Methyldiethanolamine	45050	lbs	2 15
Proxel GXL Biocide	45060	lbs	5 20
Toulene Diocyanate	45070	lbs	1.33
20% Rayon Grade Caustic	45080	lbs	11
50% Caustic	45090	lbs	08 (Old Rayon Grade)
Anquid 16/29	45100	lbs	1 15
Anquar 2C75	45120	lbs	1 85
Ingalite Blue dye	45130	lbs	13 55
DC 1500 Antifoam	45140	lbs	8 30
Drum 55 gal Duxon Col	45150	ea	44 95
Butachlor	45200	lbs	2 35
Sodium Cyanide	45300	lbs	80
TEAB	45310	lbs	3 80
Tenneco 500/100	45320	lbs	18
36% Hcl	45330	lbs	10
Toluene	45340	lbs	15
Rock Salt	45350	lbs	19
Thionyl Chloride	45360	lbs	0 70
DMF	45370	lbs	0 85
Granular Salt	45380	lbs	0 12
55 mt Drums (Cyper)	45390	lbs	29.50
2-4 DB Acid 95%	46000	Kg	2 55
Metsulfuron Methyl 90%	46010	Kg	116 50
Acido Propionico Puro	46020	Kg	1 27
Acido Propionico Usado	46030	Kg	1 27
Ditorocantona 98%	46040	Kg	3 00
Propenil Tech	46050	Kg	3 08
Criston 34	46060	Kg	2 28
Criston 180	46070	Kg	2 48
Acete Banano	46080	Kg	0 11
Oxido Meshico	46090	Kg	2 08
Tolueno	46100	Kg	0 79
Anhydrous Hydr Chloride	46200	lbs	0 70
Ethylene Oxide	46210	lbs	0 42
Phosphorus Trichloride	46220	lbs	0 42



5100 Poplar Avenue • Suite 2414 • Memphis, TN 38137 • (901) 685-5348 • Fax (901) 684-5398

May 17, 1999

Serge Ravet
Toll Manufacturing Manager
Rhone Poulenc
14-20 rue Baizet - B.P. 9163-69263
Lyon Cedex 09
France

Dear Serge,

Enclosed is an original of the secrecy agreement for the production of Cyclanilide, which has been signed on behalf of Cedar. We are looking forward to receiving the process description. We will keep you advised of our progress.

Regards,

A handwritten signature in black ink, appearing to read "Geoff Pratt", is written over a horizontal line.

Geoffrey Pratt

811988449725

ADEQ0015482

SECRETY AGREEMENT

This Agreement is made and entered as of the date last below written by and between

Rhône-Poulenc Agro Matières Actives, a French "société en nom collectif" with a capital of 640 250 000 French Francs with its registered office at: 14/20, rue Pierre Baizet - 69009 LYONS - FRANCE, registered in Lyon under number B 399 135 532,

Represented by Mr Hans MOSER, Strategic Purchasing Director, Business Development,

Hereinafter referred to as "RPAMA",

as the first Party,

And

Cedar Chemical Corporation, 5100 POPLAR Avenue, MEMPHIS, TN 38137 USA,

Represented by Mr Geoffrey L. PRATT, Vice President

Hereinafter referred to as "CEDAR",

as the second Party,

Witnesseth:

- ◆ WHEREAS, RPAMA and CEDAR own or have right to divulge certain valuable technical and proprietary information of a confidential nature, including manufacturing and formulation know-how (hereinafter referred to as « the Confidential Information »), for the manufacture and formulation of Cyclanilide or CS-DCA (1-(2,4-dichlorophenylaminocarbonyl)-cyclopropane carboxylic acid) from 2,4 DCA (2,4 Dichloro aniline) and CDM (cyclopropane-1,1-dicarboxylic acid dimethyl ether) (hereinafter referred to as "the Product").
- ◆ WHEREAS, RPAMA and CEDAR are interested in exchanging the Confidential Information for the purpose of evaluating their interest to enter into a toll manufacturing or purchase agreement, or any similar agreement, of the Product (hereinafter « the Purpose »).



ADEQ0015482

NOW, THEREFORE, in consideration of the premises and the terms and conditions herein contained the Parties have agreed as follows:

Clause 1. DEFINITIONS

"RPAMA" means RPAMA and its Affiliates.

"CEDAR" means CEDAR and its Affiliates.

« Third Party » means any Party other than RPAMA, Cedar and/or their Affiliates.

"Affiliate(s)" means any entity that directly or indirectly, through one or more intermediaries, now or hereafter controls or is controlled by or is under common control with a Party hereto, except in countries where ownership of a majority or controlling interest by a foreign entity is not permitted by law, rule or regulations, the parent's direct or indirect voting interest may be less than a majority or controlling interest.

"Control" (including the terms "controls" "controlled by", "controlling" and "under common control with") are understood as meaning the possession, direct or indirect, of the power to direct or cause the direction of the management and policies of a person or entity whether through the ownership of voting security, by contract or otherwise.

Clause 2. SECRECY

- 2.1. Both Parties agree to keep secret and confidential any and all Confidential Information disclosed to it by the other Party and not to disclose such Confidential Information, in whole or in part, to any Third Party.
- 2.2. Each Party will disclose to the other Party only such Confidential Information that it is legally and contractually free to disclose, to the extent necessary to enable the other Party to assess its interest in the Purpose.
- 2.3. Each Party agrees to use the Confidential Information only for the Purpose as defined above and not to make any further use of the Confidential Information, commercially or otherwise, without the other Party's prior written consent.

- 2.4. Each Party agrees to limit the dissemination of the Confidential Information within its organization to those of its employees requiring the Confidential Information for the Purpose of the present Agreement. Each Party will ensure that such employees are informed of its obligations hereunder.
- 2.5. Each Party agrees to return promptly, free of charge, all of the Confidential Information which is in written form to the other Party at any time, upon the other Party's request.
- 2.6. Any documents, drawings, electronic media and other material containing any part of the Confidential Information shall be destroyed by shredding into pieces or returned to the other Party upon expiration or termination of this Agreement.
- 2.7. Each Party's obligations under this Agreement with respect to Confidential Information do not apply to that portion of Confidential Information which beneficiary Party can prove :
- at the time of the disclosure are generally available to the public; or
 - after the time of disclosure become generally available to the public through no fault of the receiving Party; or
 - the receiving Party can prove to have been in its lawful possession at the time of disclosure by the other.
- 2.8. The said Confidential Information shall not be deemed to be within one of the foregoing exceptions if it is merely embraced by more general information available in the public domain or in the other Party's possession. In addition, any combination of features shall not be deemed to be within the foregoing exceptions merely because the individual features are in the public domain or in the other Party's possession.

Clause 3. LIMITATION OF RIGHT

- 3.1. Nothing herein contained shall be construed as granting to a Party any right, including any license, either express or implied, under any Confidential Information disclosed to a Party by another Party hereunder, except for a license

to use the Confidential Information to conduct the evaluation as contemplated by the Agreement.

- 3.2. Any commercial arrangement between the Parties regarding the Product shall be the subject of a separate agreement in writing.

Clause 4. DURATION

Unless terminated earlier or otherwise extended by mutual agreement in writing, this Agreement shall be effective as from the date of signature and shall terminate 1 (one) year later, except for the confidentiality and non-use obligations set forth in Clause 2. which shall last for 20 (twenty) years from the date of signature of this Agreement.

Clause 5. AMENDMENT

No amendment or consensual cancellation of this Agreement or any provisions or terms thereof and no extension of time or waiver or relaxation or suspension of any of the provisions or terms of this Agreement shall be binding unless recorded in a written document signed by the Parties. Any such extension, waiver or relaxation or suspension which is so given or made shall be strictly construed as relating to the matter in respect whereof it was made or given.

Clause 6. ENTIRETY

This Agreement contains the entire understanding between the Parties hereto regarding the subject matter hereof, and cancels and supersedes all previous agreements, representations and understandings, written or oral between the Parties hereto regarding the subject matter hereof.

L.
S. J.

Clause 7. ASSIGNMENT

The rights and obligations of this Agreement cannot be assigned to a Third Party by a Party without the prior written consent of the other Party.

Clause 8. APPLICABLE LAW

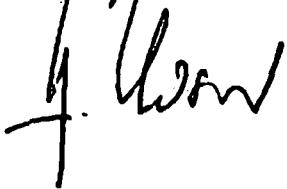
This Agreement shall be interpreted and construed in accordance with, and its performance shall be governed by French law.

IN WITNESS WHEREOF, the Parties hereto have caused this Agreement to be duly executed as of the day and year last below written.

Rhône-Poulenc Agro Matières Actives

Name : Hans MOSER

Title : Strategic Purchasing Director,
Business Development

Date: 3 May 1999


Cedar Chemicals Corporation

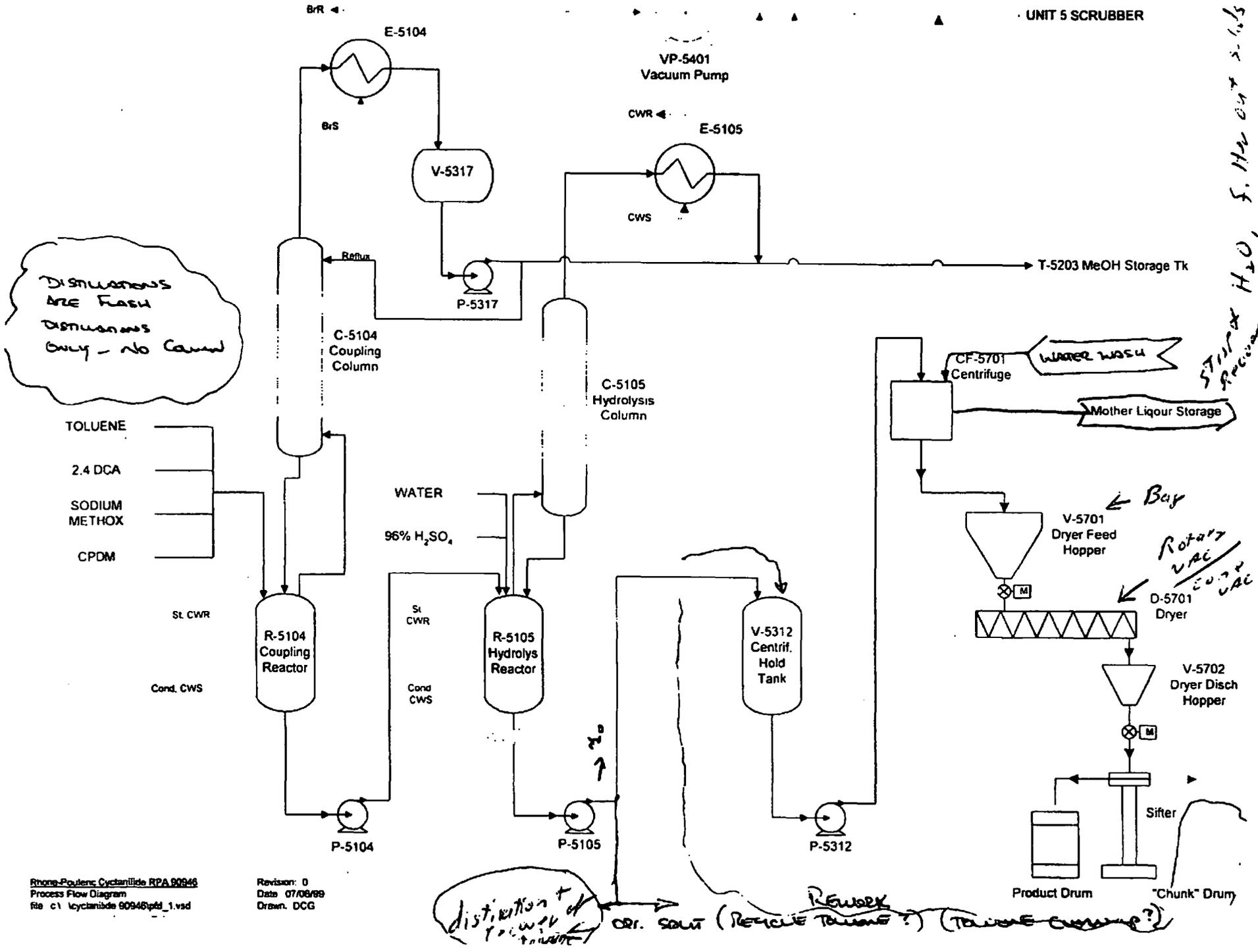
Name : Geoffrey L. PRATT

Title : Vice President

Date: May 14, 1999


BrR ←

UNIT 5 SCRUBBER



DISTILLATIONS ARE FLASH DISTILLATIONS ONLY - NO COLUMN

STIPPER H₂O, S. H₂O out 2-10-13

Rotary VAC DRYER

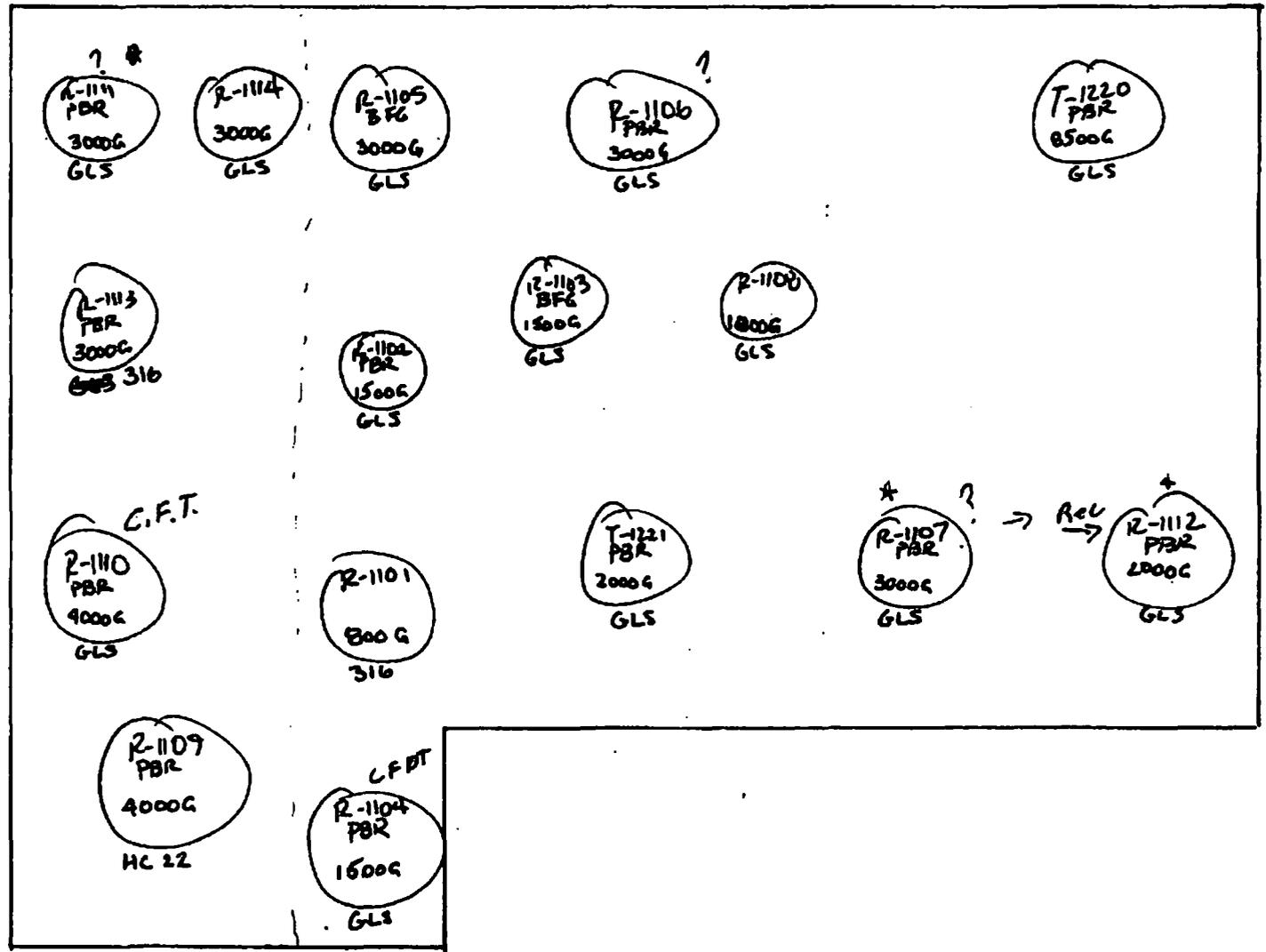
distillation + recovery of solvent

REWORK

ORI. SOLUT (RECYCLE TOLUENE?) (TOLUENE CIRCULATE?)

Rhone-Poulenc, Cycloamide RPA 90946
Process Flow Diagram
file c:\toychem\pdd\pdd_1.vsd

Revision: 0
Date 07/08/89
Drawn: DCG



UNIT 7 VESSELS

7/14/99

RHONE POULENC CYCLANILIDE

	Base Case			Increased Productivity		
	2000	Year 2001	2002	2000	Year 2001	2002
Cedar Capital M-\$	750			625		
Plant Capacity M-Kgs	402			876		
Production M-Kgs	75	150	200	75	150	200
Production Time Days	58	132	180	21	58	81
Startup Time Days	30	14	7	30	14	7
Platn Prep. & CO Days	10	10	10	10	10	10
Total Days	98	156	197	61	82	98
Raw Materials \$3.56/kg	267	534	712	267	534	712
Waste Treatment 0 lb/kg	0	0	0	0	0	0
Price Inc. Capital Rec/Kg	25.59	20.49	19.45	17.71	12.61	11.57
Average 2000-2002		20.90			13.02	

Fee \$/day	
Startup	18
Normal	16

Raw Materials			
	kg/kg	\$/kg R	\$/kg Prod
Sod Methoxide 25%	2.14	1.46	3.11
Sulfuric	0.18	1.56	0.28
Toluene	0.62	0.26	0.16
Total			3.56

7/14/89

T-208 P.03/03 F-778

+9016845388

RHONE POULENC CYCLANILIDE

	Base Case			Increased Productivity		
	Year			Year		
	2000	2001	2002	2000	2001	2002
Cedar Capital M-\$	750			625		
Plant Capacity M-Kgs	402			878		
Production M-Kgs	75	150	200	75	150	200
Production Time Days	58	132	180	21	58	81
Startup Time Days	30	14	7	30	14	7
Platn Prep. & CO Days	10	10	10	10	10	10
Total Days	98	156	197	61	82	98
Raw Materials \$3.56/kg	267	534	712	267	534	712
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Sulfuric	0.18	1.56	0.28
Toluene	0.62	0.26	0.16
Total			3.56

Sep-09-89 10:37am From-CEDAR CHEMICAL

Rhone Poulenc RPA 90946 (Cyclanilide)

Heat & Mass Balance

R.P. Basis 0.53 gallons (2 L)
 Cedar Basis 3,000.00 gallons (3,000 per train x 2 trains)
 Straight Line Multiplier 5,679.35

Assumptions:

- Process overall 80% O.S.T.
- Startup Adjustment Factor 80%
- 0.5% Material Loss through drying
- 0.5% Material Loss through centrifugation
- Centrifugation C/T=45 minutes @ 300 lb./plow
- Toluene is not recycled in the process.
-
-
-
-

Need/Plan 2.4 mt/day

*I DRAW ONLY
 Do for Free process*

Summary of Results	
Final Prod't lb/batch:	2,165 lb
Limit'g Cycle Time:	22.0 hours
Final Product lb/day:	2,362 lb/day

~~\$ 6.85 /lb to make \$15k/day~~

Stream No.	Description	COUPLING REACTION				HYDROLYSIS REACTION			ACIDIFICATION			
		1	2	3	4	5	6	7	8	9	10	11
		Initial Charge	Na Methylate Sol'n	Azeo Distilla'n	CPDM Charge	Rxn Generat'd MeOH	Coupling Product	Water Charge	MeOH Distilla'n	Hydroly's Product	H ₂ SO ₄ Charge	Wet Final Product
Component	MW											
Raw Materials												
CPDM	158.10				1,970.8							
2,4 DCA	162.00	2,040.9										
NaOCH ₃	54.00		741.1									
MeOH	32.00		2,223.3	2,223.3								
H ₂ O	18.00						13,462.6				25.5	
H ₂ SO ₄	98.00										610.8	
Toluene	92.15	17,191.1		5,187.8								
(By) Products												
Na-CPMPA	310.10						3,865.5					
MeOH	32.00					797.8			623.3			
Na-RPA 90946	296.10									3,691.0		
RPA 90946	274.10											2,186.7
Na ₂ SO ₄	142.00										885.0	
Salts	---											
Others	---											
Total		19,232.0	2,964.4	7,411.1	1,970.8	797.8	3,865.5	13,462.6	623.3	3,691.0	1,521.3	2,186.7
Stream Weight (lb/batch)												
Stream Weight (lb/batch)												
Stream Volume (gal)		2,886.0						1,616.2				
Temperature (°F)		77.0	77.0	147.2	68.0		230.0	77.0	212.0	68.0	77.0	77.0
Pressure (psia, {torr})		14.7	14.7	{400}	14.7	{400}	14.7	14.7		14.7	14.7	14.7
S.G.		0.8										
Cycle Time (hr)							16.0			5.0		1.0

"Front End" Time Cycle 22.0

Rhone Poulenc RPA 90946 (C)
Heat & Mass Balance

R.P. Basis 0.53
 Cedar Basis 3,000.00
 Straight Line Multiplier 5,679.35

Assumptions:

1. Process overall 80% O.S.T.
2. Startup Adjustment Factor 80%
3. 0.5% Material Loss through drying
4. 0.5% Material Loss through centrifugation
5. Centrifugation C/T=45 minutes @ 300 lb./plc

|-----ISOLATION & DRYING-----|

Stream No.		12	13	14	15	16				
Description		From Centrifug'n	Vent from Dryer	Dried Final Product	Total Waste	Waste w/Tol Recycle	Totals	Mol Totals		
Component	MW									
Raw Materials										
CPDM	158.10						1,970.8	12.5		
2,4 DCA	162.00						2,040.9	12.6		
NaOCH3	54.00						741.1	13.7		
MeOH	32.00						2,223.3	69.5		
H2O	18.00	13,488.1	13,477.3	10.8	40,464.2	80,928.5	40,464.2			
H2SO4	98.00						610.8	6.2		
Toluene	92.15				17,191.1	2,578.7				
(By) Products										
Na-CPMPA	310.10						3,865.5	12.5		
MeOH	32.00				3,644.4	3,644.4	1,421.1	44.4		
Na-RPA 90946	296.10						3,691.0	12.5		
RPA 90946	274.10	2,175.8		2,164.9						
Na2SO4	142.00				885.0	885.0	885.0	6.2		
Salts	--									
Others	--									
Total		15,663.9	13,477.3	2,175.7	62,184.8	88,036.5				
Stream Weight (lb/batch)										
Stream Volume (gal)										
Temperature (°F)		68.0	212.0	212.0						
Pressure (psia, (torr))		14.7	14.7	14.7						
S.G.										
Cycle Time (hr)		5.5	12.0							

"Back End"
 Time Cycle

17.5



Memorandum

To: David Guffey
CC:
From: Geoff Pratt
Date: October 28, 1999
Re: Rhone-Poulenc Information

David:

These procedures will be needed for the lab trials for cyclanilide.

GP:MG

Copy
GREG S.
DOC (TONY)
CHRIS M.
JIM R.



Rhône-Poulenc Agro

**CEDAR
Mr Geoffrey L. PRATT
5100 Poplar Ave.
Suite 2414
Memphis, TN 38137
UNITED STATES**

Lyon, la **25th October 1999**

Réf : fb/SR 180.99

Dear Geoffrey,

Following our meeting in Memphis in October, you will find herewith the analytical procedures implemented in the Cyclanilide dosage :

- **Document : R&D/CRLD/AN/ Reference 9516131- 26/07/95
Method C-821-07-95 (E)**
- **Document : R&D/CRLD/AN/ Reference 9515907- 20/06/95
Method C-817-06-95 (E)**
- **Document : R&D/CRLD/AN/ Reference 9515902- 20/06/94
Method C-816-06-95 (E)**

A new method by CPG will be developped soon in replacement of the present one used to dose 2,4 – DCA.

The samples of CPDM, 2,4 – DCA and Cyclanilide has been ordered and will be sent directly to your West Helena plant within 2 weeks.

Best regards.

**Serge RAVET
Toll Manufacturing Manager**

Copie : Pierre LEROY



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CC:
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RHÔNE-POULENC SECTEUR AGRO	Department:	Reference :	DOC Nr : 438656
	R&D/CRLD/AN	9515902	Date : 20/06/94
			GOoD ID: 8057
External Performer(s) :			

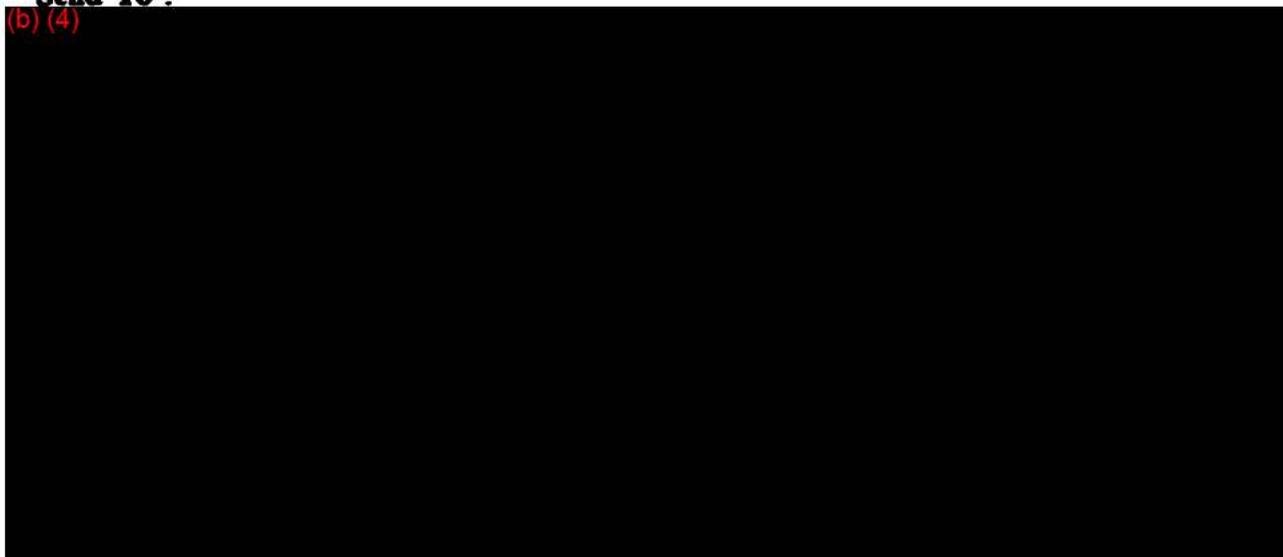
Author(s) :

Internal : J. COUSIN, J. PERNET and R. REYNAUD

External :

Title : Technical Cyclanilide - GC determination of methanol and toluene

Send To :





RHÔNE-POULENC

BUSINESS CONFIDENTIAL

SECTEUR AGRO

RHÔNE-POULENC AGROCHIMIE
14-20 RUE PIERRE BAIZET B.P. 9163
69263 LYON CEDEX 09
TEL. 72.29.25.25 - FAX 72.29.29.67
TLX 306147 F RHÔNE

**Technical Cyclanilide
GC determination of
methanol and toluene**

**Research and Development
Centre de Recherche de La Dargoire**

Method C-816-06-95 (E)

Date : 20/06/1995

Authors : R. REYNAUD

Handwritten signature of R. Reynaud.

J. PERNET

Handwritten signature of J. Pernet.

Approved by : J. COUSIN

Handwritten signature of J. Cousin.

The information herein is **CONFIDENTIAL** and is the property of **RHÔNE-POULENC SECTEUR AGRO**. It is provided for the sole purpose of supporting the application for registration and may not be disclosed to other parties nor be used for any other purpose.

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Copy
GREG S.
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JIM R.



RHÔNE-POULENC SECTEUR AGRO	Department:	Reference :	DOC Nr : 438656
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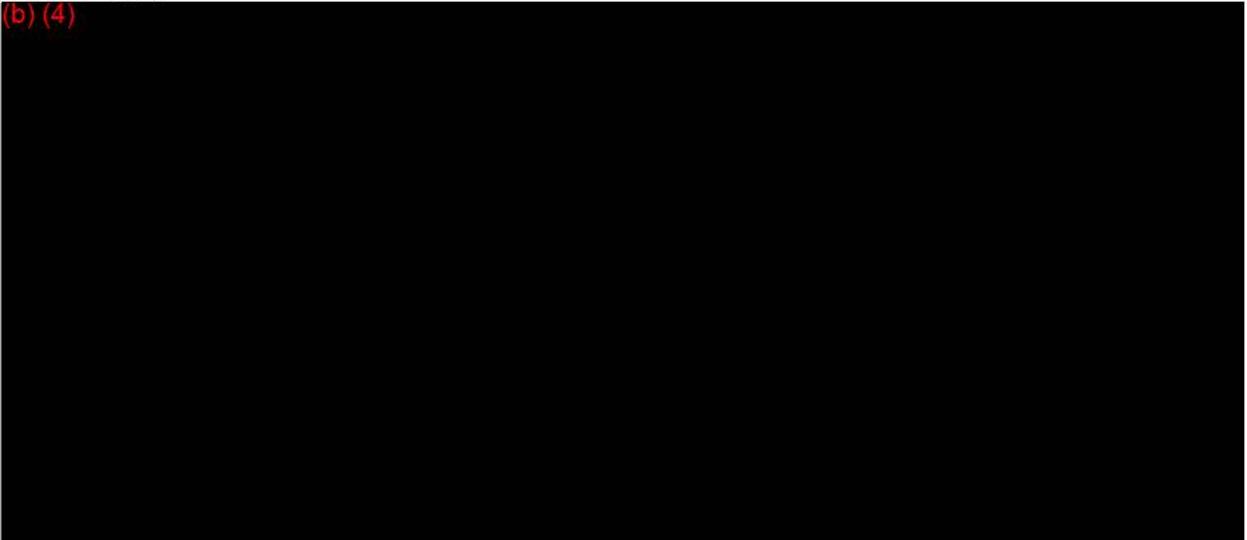
Author(s) :

Internal : J. COUSIN, J. PERNET and R. REYNAUD

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Title : Technical Cyclanilide - GC determination of methanol and toluene

Send To :





RHONE-POULENC

BUSINESS CONFIDENTIAL

SECTEUR AGRO

RHÔNE-POULENC AGROCHIMIE
14-20 RUE PIERRE BAIZET B.P. 9163
69263 LYON CEDEX 09
TEL. 72.29.25.25 - FAX 72.29.29.67
TLX 306147 P RHÔNE

**Technical Cyclanilide
GC determination of
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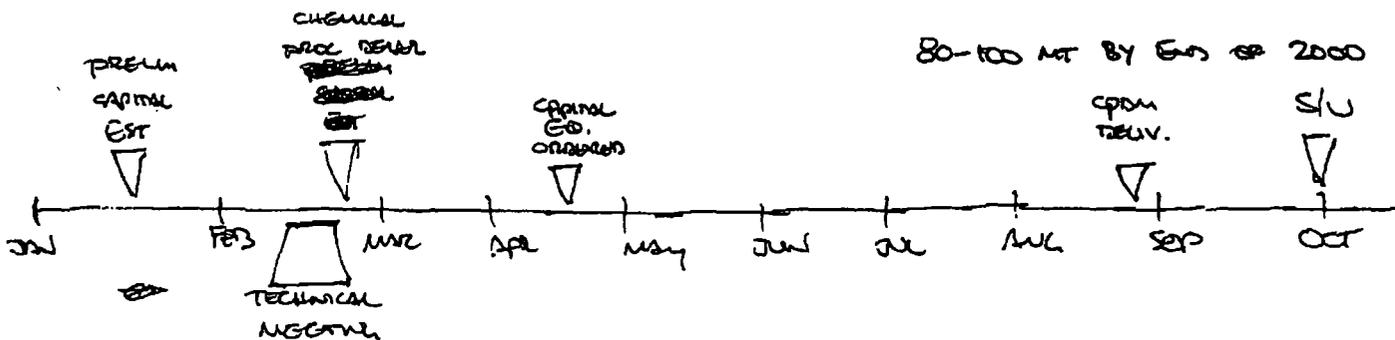
DEGUSSA PLANT = PILOT UNIT, NOT DESIGNED SPECIFICALLY FOR THE RP PROCESS

DEGUSSA PROCESS LIC. TO RP.

TODAY DISCUSSION OF CHEMISTRY

1ST POINT → USE XYLENE INSTEAD OF TOLUENE
2ND → USE 100% ^{KOH} ~~NaOH~~ INSTEAD OF METHOXIDE

⊗ RP METHOD FOR COUPLER IS BETTER (A/I)
- DETERMINE WHICH IS BETTER



RP PROCESS - ADD NaOH BUT MUST CONTROL TEMP TO AVOID DEGRADATION PRODUCTS.

~~QUESTIONS OF THE DAY~~

LEAVING SOME NaOH IN ACTIVATION MAY HELP CRYSTALLIZATION

⊕ AFTER OPEN ACTION - NO SALT PRECIPITATES - STIRRING IS CRUCIAL

NEED 10 THERM PLATES FOR NaOH TOL & NaOH STRIPS

QUALITY OF R/M SHOULD BE CHECKED

ACTION ITEMS

1. TEST XYLENE VS. TOLUENE W PROCESS
* WHO: _____
* WHEN: _____
2. TEST KOH/MeOH VS. METHOXIDE (SOLID KOH OR KOH W MeOH?)
* WHO: _____ } THEN HAVE TO DO RP METHODS W/
* WHEN: _____ } KOL
3. DISCUSS RP VS. DEGUSSA COUPLING PROCEDURES -
RP - 85% DEGUSSA, 90% RP → TONY - 90% DEGUSSA, 85% RP
* WHO _____
* WHEN _____
4. DETERMINE METHODS OF ANALYSIS FOR HYDROLYSIS - GC OF ESTER
IN TOLUENE OR pH.
* WHO
* WHEN
5. DETERMINE ACIDS TO USE FOR ACIDIFICATION - FORMIC VS.
SULFURIC VS. PHOSPHORIC VS. PROPANOIC
* WHO
* WHEN
6. DOE FOR CRYSTALLIZATION - DEPENDENT
* WHO
* WHEN
7. LAB RUN W/ RP & DEGUSSA PROCESSES TO GENERATE
FULL MATERIAL BALANCE
* WHO
* WHEN

8. GENERATE SERIES 61 & SERIES 62 DOCUMENT
FOR EPA

→ PROCESS DESCRIPTION

→ PROCESS CHEMISTRY

- * WHO
- * WHEN: BY 01 SEP 00
- HAS PUMP SAMPLES (5) FOR DOSSIER
- HAVE PRELIMINARY DOCUMENT BY MARCH 00
(DEFINE OPERATING CONDITIONS - SERIES 61)



Internal Correspondence

To: Chris McGee, Jim Rone
CC: A. Dinculescu
From: David C. Guffey
Date: 14 December 1999
RE: Cyclanilide 90946 Process—Process Technology Questions

Following are questions from the Rhone-Poulenc process for generation of RP-90946:

A. Coupling

1. What are purchase specs for Toluene (especially water content)?
2. Use mixed Xylenes instead of Toluene—No MeOH azeotrope. Issues?
3. How many theo stages req'd for Toluene/MeOH distillation?
4. What happens if MeOH left in reactor?
5. Third and last ¶'s of Section 5.1.5 of "Merit Note" Rev. 0, indicates final pot temp of 110°C for complete MeOH removal—is this a separate heat up step or a normal ramp-up of temperature during the final MeOH distillation?
6. When Na-CPMPA precipitates in solution—what is density and viscosity of resulting slurry?
7. Toluene/MeOH azeotrope waste or break azeotrope in Toluene recovery?
8. What is vacuum utilized for MeOH strip—controlled or FV?
9. Does Azeo strip require vacuum?
10. What increases/decreases the reaction of 2,4 DCA with the second ester group to form impurity n°6?

B. Hydrolysis

1. What are effects of too much / too little water?
2. Max Temperature listed as 100°C—what happens if temperature exceeded?
3. What is density and viscosity of resulting aqueous slurry?
4. Is there a rag layer in the decant process?
5. If there is a rag layer, does it go with the aqueous or organic phases?
6. Distillation column required for MeOH removal?
7. What happens if all MeOH not removed?

C. Acidification

1. Acidification step—stop before 1-1.5—what happens.
2. After acidification step—can we bring pH back to 4-5 from 1-1.5?

D. Isolation & Drying

1. Corrosion data for 316 stainless steel at pH 1-1.5?
2. Corrosion data for Hastelloy C-22 and/or C-276 at pH 1-1.5?
3. Bulk Density of Wet Solids from Centrifugation?
4. Bulk Density of Dry Solids?
5. What kind of dryer currently used? Operating conditions? Cp of the RP-90946?
6. What happens if dryer temperature exceeded?
7. What is melt point of solid?

8. Is the product thermally stable—R&D tests?

E. Toluene Recovery

1. What are details of toluene recovery—i.e. equipment utilized, operating conditions, stream compositions, recovered toluene specs, etc.
2. How many theo. stages required?
3. What is overall toluene recovery?

F. Waste Disposal

1. Typical composition of aqueous waste stream?
2. Typical composition of organic waste stream?

Rhone-Poulenc RPA 90946 (Cyclanilide)
Major Equipment Identification

<u>Service</u>	<u>Equip. No.</u>	<u>Train A</u>		<u>Equip. No.</u>	<u>Train B</u>	
		<u>Mat'l Const.</u>	<u>Capacity</u>		<u>Mat'l Const.</u>	<u>Capacity</u>
Premix Tank	R-1102	GLS	1500 gal	R-1104	GLS	1500 gal
Coupling Reactor Coupling Column	R-1106	GLS	3000 gal	R-1107	GLS	3000 gal
Hydrol./Acid'n Rxtr H/A Column	R-1110	GLS	4000 gal	R-1111	GLS	3000 gal
Centrifuge Feed Tk	R-1109	Hast-C	4000 gal	N/A	N/A	N/A
Centrifuge	CF-125* 1405	Hast-C	48"x30" P/B	N/A	N/A	N/A
Dryer	D-7100	304 SS	7 cu. Meter	N/A	N/A	N/A
Scrubber	C-1401	CS/FRP	N/A	N/A	N/A	N/A
Toluene Recovery Still Pot	TBD			N/A	N/A	N/A
T/R Column	TBD			N/A	N/A	N/A
Water Recovery Still Pot	TBD			N/A	N/A	N/A
T/R Column	TBD			N/A	N/A	N/A

Rhone-Poulenc RPA 90946 (Cyclanilide)**Major Equipment Identification**

<u>Service</u>	<u>Equip. No.</u>	<u>Train A</u>		<u>Equip. No.</u>	<u>Train B</u>	
		<u>Mat'l Const.</u>	<u>Capacity</u>		<u>Mat'l Const.</u>	<u>Capacity</u>
Premix Tank	R-1102	GLS	1500 gal	R-1104	GLS	1500 gal
Coupling Reactor Coupling Column	R-1106	GLS	3000 gal	R-1107	GLS	3000 gal
Hydrol./Acid'n Rxt H/A Column	R-1110	GLS	4000 gal	R-1111	GLS	3000 gal
Centrifuge Feed Tk	R-1109	Hast-C	4000 gal	N/A	N/A	N/A
Centrifuge	F-1254	Hast-C	48"x30" P/B	N/A	N/A	N/A
Dryer	D-7100	304 SS	7 cu. Meter	N/A	N/A	N/A
Scrubber	C-1401	CS/FRP	N/A	N/A	N/A	N/A
Toluene Recovery Still Pot	TBD			N/A	N/A	N/A
T/R Column	TBD			N/A	N/A	N/A
Water Recovery Still Pot	TBD			N/A	N/A	N/A
T/R Column	TBD			N/A	N/A	N/A

Rhone Poulenc RPA 90946 (C)

Heat & Mass Balance

R.P. Basis 0.53
Cedar Basis 1,775.00

Assumptions:

1. Process overall 80% O.S.T.
2. 0.5% Material Loss through centrifugation
3. Centrifuge discharge @ 1.2% LOD
4. Centrifugation Cycle=45 minutes @ 300 lb./p
5. Dryer discharge at 0.5% LOD

Stream No.	Description	ISOLATION & DRYING				SOLVENT RECVRY		WASTE			
		12	13	14	15	16	17	XX	XX		
		Mother Liquor Discharge	Wet Prod't to Dryer	Vent from Dryer	Dried Final Product	Toluene to Recycle	Recycled Toluene	Organic Waste	Aqueous Waste		
Component	MW										
Raw Materials											
CPDM	158.10										
2,4 DCA	162.00										
NaOCH3	54.00										
MeOH	32.00										
H2O	18.00	7,673.0	206.7	199.9	6.9	15.5		15.5	7,872.8		
NaOH	40.00										
H2SO4	98.00										
Toluene	92.15					9,672.4	8,606.1	1,565.4			
(By) Products											
Na-CPMPA	310.10										
MeOH	32.00							2,018.8			
Na-RPA 90946	296.10										
RPA 90946	274.10		1,722.9		1,378.3						
Na2SO4	142.00	658.8							658.8		
Others	---					285.0		285.0			
Stream Weight, lb/batch		8,331.7	1,929.6	199.9	1,385.2	9,972.9	8,606.1	3,884.6	8,531.6		
Stream Volume, gal {ft3}		1,000.2		30.0		1,381.4	1,192.0	565.2	975.4		
Temperature, °F		68.0	68.0	212.0	212.0	68.0	75.0	68.0	68.0		
Pressure, psia {torr}		14.7	14.7	14.7	14.7	14.7	14.7	14.7	14.7		
Density, g/cc {lb/ft3}		1.00		0.80		0.87	0.87	0.83	1.05		
Viscosity, cP (cSt)											
Molar Yield {Overall}					(68.2%)						

Rhone Poulenc RPA 90946 (Cyclanilide)

Heat & Mass Balance

R P. Basis 0.53 gallons (2 L)
 Cedar Basis 1,775.00 gallons (3,000 per train x 3 trains)

Summary of Results	
Final Product lb/bx.	1,378 lb
Limiting Cycle Time:	21.6 hours
Final Product lb/day:	1,534 lb/day

Assumptions:

- | | |
|---|---|
| 1. Process overall 80% O.S.T. | 6. All Yield calculations based on CPDM |
| 2. 0.5% Material Loss through centrifugation | 7. --- |
| 3. Centrifuge discharge @ 12% LOD | 8. --- |
| 4. Centrifugation Cycle=45 minutes @ 300 lb./plow | 9. --- |
| 5. Dryer discharge at 0.5% LOD | 10. --- |

Stream No.	Description	COUPLING REACTION						HYDROLYSIS REACTION			ACIDIFICATION	
		1	2	3	4	5	6	7	8	9	10	11
		Initial Charge	Na Methylate Sol'n	Azeo Distillat'n	CPDM Charge	Rxn MeOH-Distillat'n	Coupling Product	Water Charge	Rxn MeOH-Distillat'n	Hydroly's Product	H ₂ SO ₄ Charge	Final Product Slurry
Component	MW											
Raw Materials												
CPDM	158.10				1,166.0							
2,4 DCA	162.00	1,207.5										
NaOCH ₃	54.00		438.5									
MeOH	32.00		1,315.5	1,315.5								
H ₂ O	18.00						7,806.1			7,806.1	18.9	7,880.7
NaOH	40.00						158.2					
H ₂ SO ₄	98.00										454.7	
Toluene	92.15	10,171.4		499.0		9,672.4				9,672.4		
(By) Products												
Na-CPMPA	310.10					2,241.4						
MeOH	32.00					472.0			231.3			
Na-RPA 90946	296.10									2,033.2		
RPA 90946	274.10											1,731.5
Na ₂ SO ₄	142.00										658.8	658.8
Others	---						44.8			101.7	138.5	
Stream Weight, lb/batch		11,378.9	1,754.0	1,814.4	1,166.0	472.0	11,958.6	7,964.3	231.3	19,613.3	1,270.9	10,271.0
Stream Volume, gal (ft³)		1,575.8	222.8	268.2	122.0	71.6	1,656.0	956.1	35.1	2,541.8	117.4	1,233.0
Temperature, °F		77.0	77.0	146.3	68.0	148.5	230.0	77.0	212.0	68.0	77.0	77.0
Pressure, psia (torr)		14.7	14.7	{400}	14.7	14.7	14.7	14.7	14.7	14.7	14.7	14.7
Density, g/cc (lb/ft³)		0.87	0.95	0.81	1.15	0.79	0.87	1.00	0.79	0.93	1.30	1.00
Viscosity, cP (CSt)												
Molar Yield (Overall)							98.0%			95.0%		92.0%

Note:
 0.0 indicates calculated value
 otherwise value is estimated

Time Red'd Total Batch
 57.1 hours

Drying
 Packout 1.5
 Dry Batch 8.0
 Charge 1.5 batches 1.0

R-1109 Centrifugation (R-2)
 Centrifuge Batch 8.1

R-1110, R-1111 Acidification (R-4)
 Transfer 0.5
 Sample Results 0.5
 Mix 0.5
 Charge Formic Acid 3.0
 Cool >25°C 1.0
 Phase Separator \ Transfer 1.0
 Sample/NaOH Adjust 2.0
 Cool Rxt >20°C 1.0
 Distill MeOH 1.0
 Heat Reflux 2.0
 Charge Water 1.0

R-1106, R-1107 Coupling Reaction (R-2)
 Unit 1
 R-1106, R-1107 Heat to 55-58°C 0.8
 Draw Vacuum 0.3
 Charge Premix 0.3

R-1102, R-1104 Premix Prep (R-1)
 Unit 1
 R-1102, R-1104 Mix Hold 0.5
 Charge 2.4 DCA 0.2
 Charge Toluene 0.1

R-1105, R-1108 Hydrolysis Reaction (R-3)
 Unit 1
 R-1105, R-1108 Transfer to Hydrolysis Rxt 1.0
 Charge Water 0.2
 Cool to 60-65°C 1.0
 Distill MeOH/Toluene Azeotrope 2.0
 Charge Na Methoxide 2.0

R-1105, R-1108 Hydrolysis Reaction (R-3)
 Unit 1
 R-1105, R-1108 Transfer to Hydrolysis Rxt 1.0
 Charge Water 0.2
 Cool to 60-65°C 1.0
 Distill MeOH/Toluene Azeotrope 2.0
 Charge Na Methoxide 2.0

R-1105, R-1108 Hydrolysis Reaction (R-3)
 Unit 1
 R-1105, R-1108 Transfer to Hydrolysis Rxt 1.0
 Charge Water 0.2
 Cool to 60-65°C 1.0
 Distill MeOH/Toluene Azeotrope 2.0
 Charge Na Methoxide 2.0

R-1105, R-1108 Hydrolysis Reaction (R-3)
 Unit 1
 R-1105, R-1108 Transfer to Hydrolysis Rxt 1.0
 Charge Water 0.2
 Cool to 60-65°C 1.0
 Distill MeOH/Toluene Azeotrope 2.0
 Charge Na Methoxide 2.0

R-1105, R-1108 Hydrolysis Reaction (R-3)
 Unit 1
 R-1105, R-1108 Transfer to Hydrolysis Rxt 1.0
 Charge Water 0.2
 Cool to 60-65°C 1.0
 Distill MeOH/Toluene Azeotrope 2.0
 Charge Na Methoxide 2.0

R-1105, R-1108 Hydrolysis Reaction (R-3)
 Unit 1
 R-1105, R-1108 Transfer to Hydrolysis Rxt 1.0
 Charge Water 0.2
 Cool to 60-65°C 1.0
 Distill MeOH/Toluene Azeotrope 2.0
 Charge Na Methoxide 2.0

Rate Limiting
 Time
 19.2 hours

Cycle Time Analysis
 Rhone Poulenc RPA 8046 (Cyclanilide)-Degussa-Huls Technology Basis

Rhone Poulenc RPA 90946 (Cyclanilide)—DeGussa-Huls Technology Basis
 Cycle Time Analysis

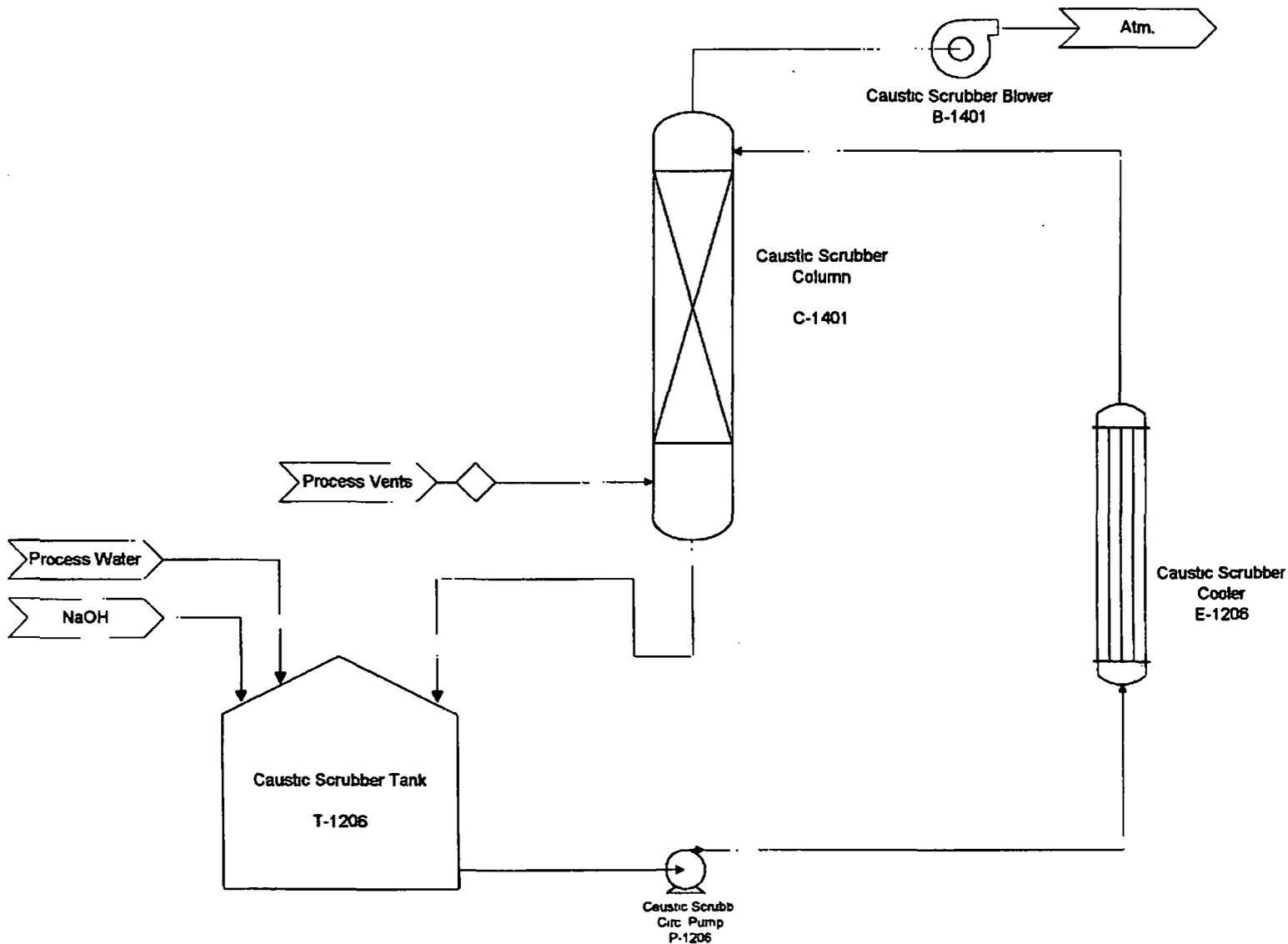
Rate Limiting Time 19.5 hours

Cycle Time Analysis	Step Cycle Time	Vessel Cycle Time	
Premix Prep (R-1) Unit 1 R-1102, R-1104	Charge Toluene 0.1 Charge 2,4 DCA 0.7 [Drum] Mix/Hold 0.5	Σ = 1.3	
Coupling Reaction (R-2) Unit 1 R-1106, R-1107	Charge Premix 0.3 Draw Vacuum 0.3 Heat to 56-59°C 0.8 Charge Na Methoxide 0.8 3.0 Distill MeOH/Toluene Azeotrope 2.0 Cool to 60-65°C 1.0 Charge Water 0.2 Transfer to Hydrolysis Rxtr 1.0	Σ = 8.6 13.6 or 17.2 for 2 trans	
Hydrolysis Reaction (R-3) Unit 1 R-1110, R-1111	Charge Water 1.0 Heat/Reflux 5.0 Distill MeOH 1.0 Cool Rxtr <50°C 1.0 Sample/NaOH Adjust 5.0 Phase Separate / Transfer 1.0		
Acidification (R-4) R-1110, R-1111	Cool >25°C 1.0 Charge Formic Acid 3.0 Mix 0.5 Sample/Results 0.5 Transfer 0.5	Σ = 19.5	
Centrifugation (R-5) R-1109	Centrifuge Batch 6.1	Σ = 12.2	
Drying	Charge 1.5 batches 1.0 Dry Batch 8.0 Packout 1.5	Σ = 10.5	

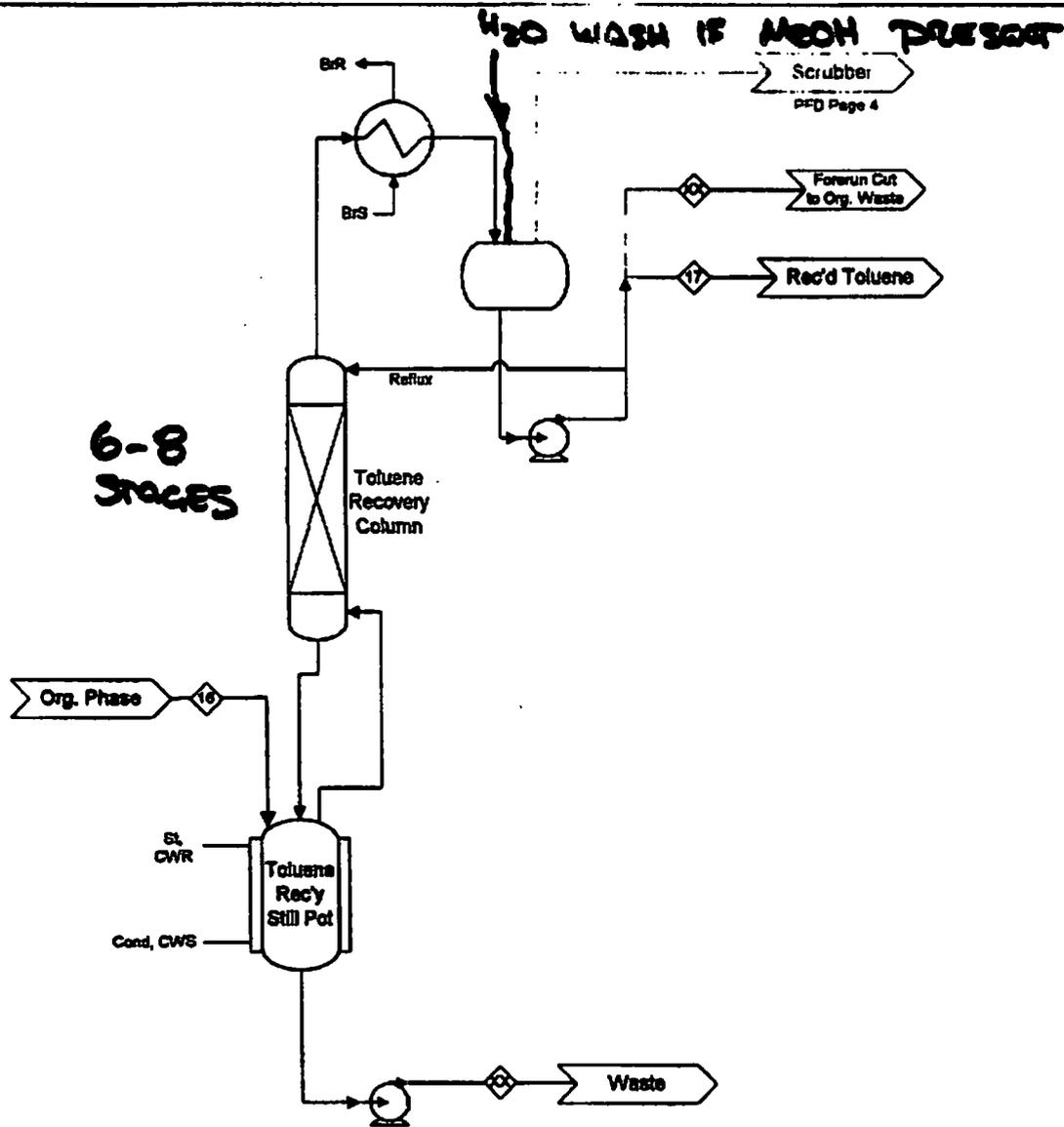
Note.

nn.n indicates calculated value,
 otherwise value is estimated

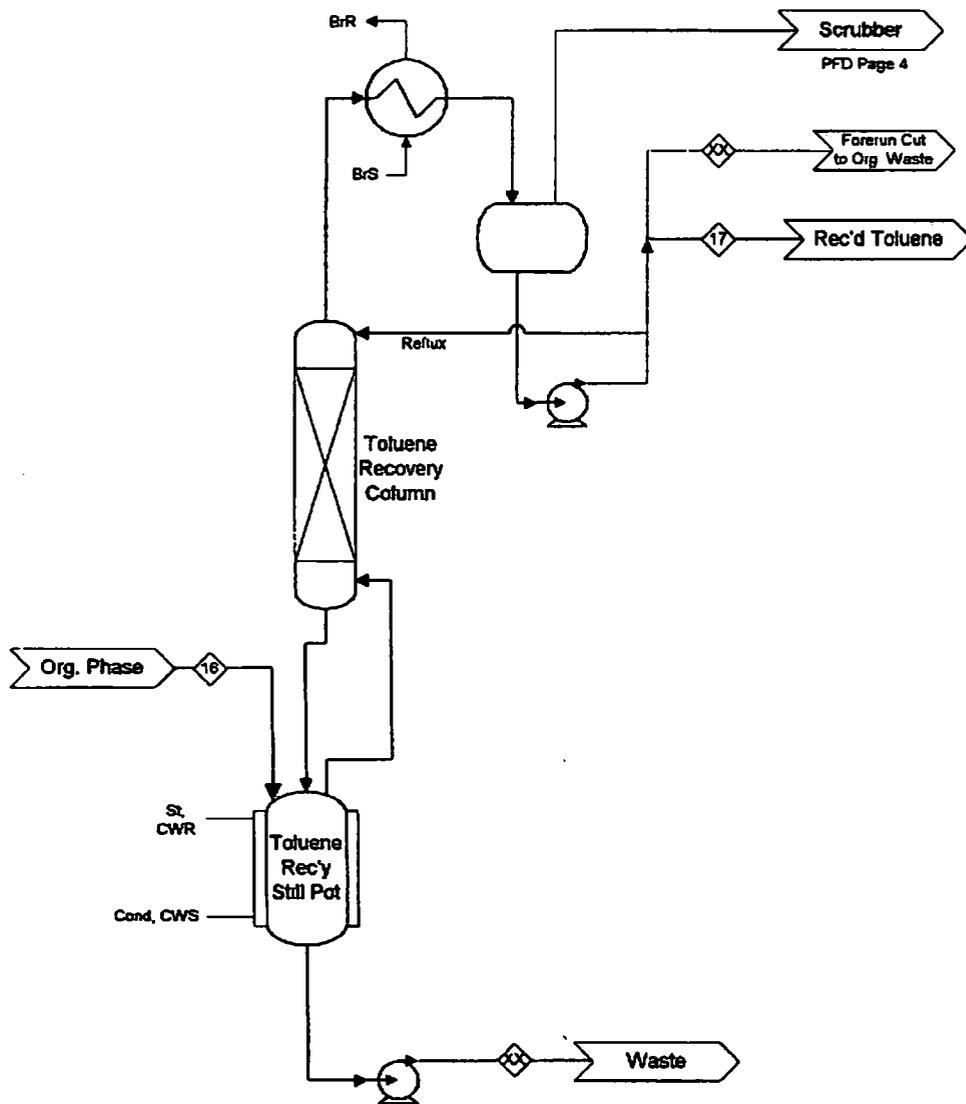
Total Batch Time Req'd 57.1 hours



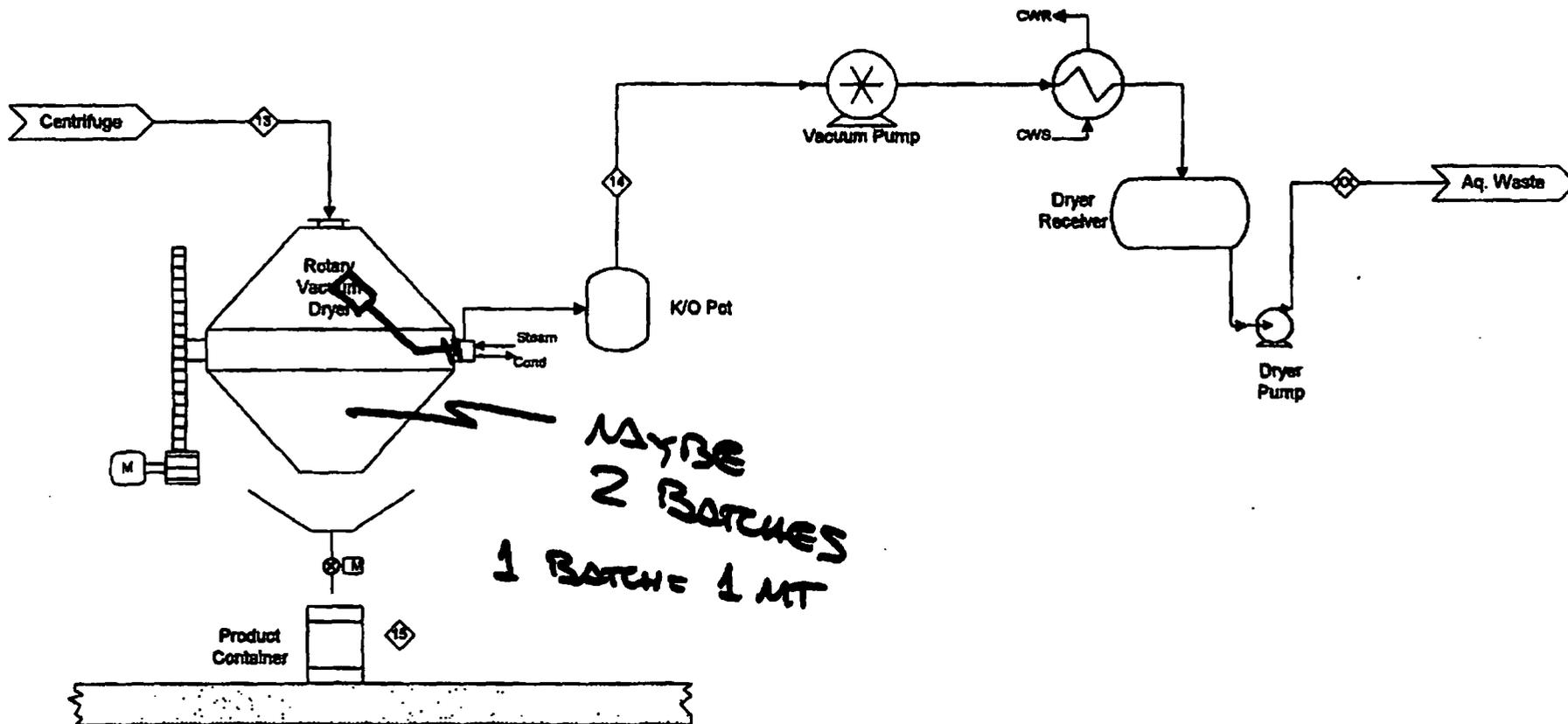
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	Page 3 of 4 Pages		
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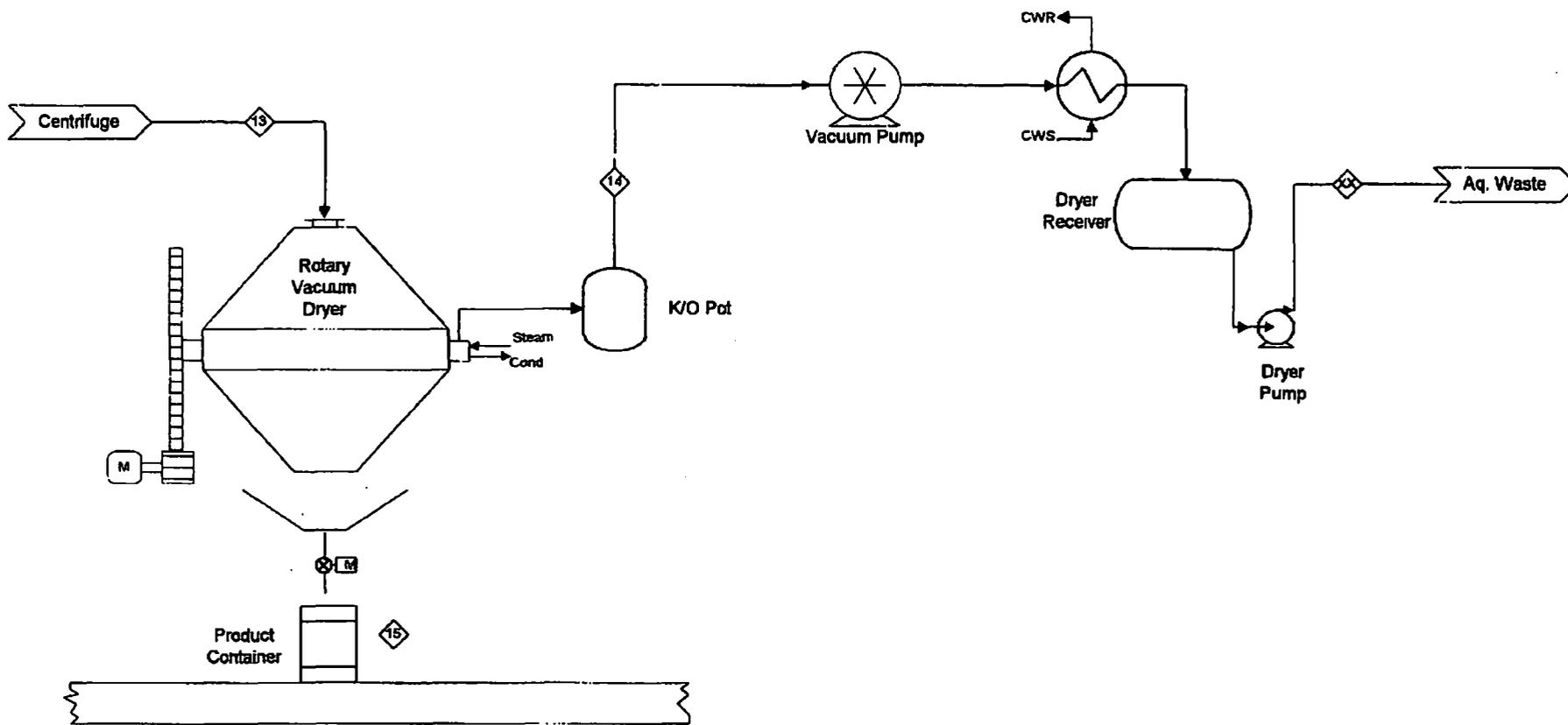


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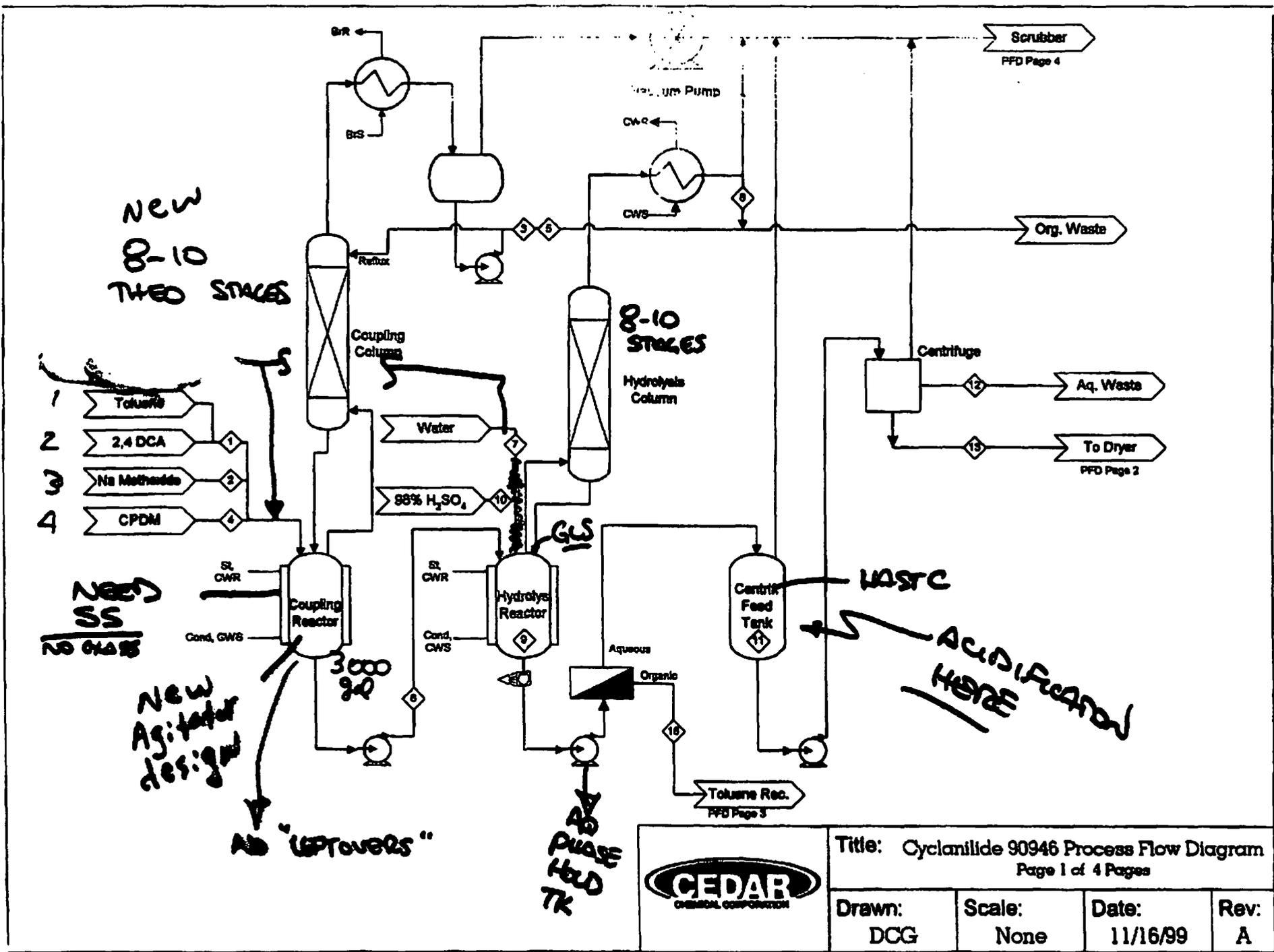


Title: Cyclanilide 90946 Process Flow Diagram
Page 2 of 4 Pages

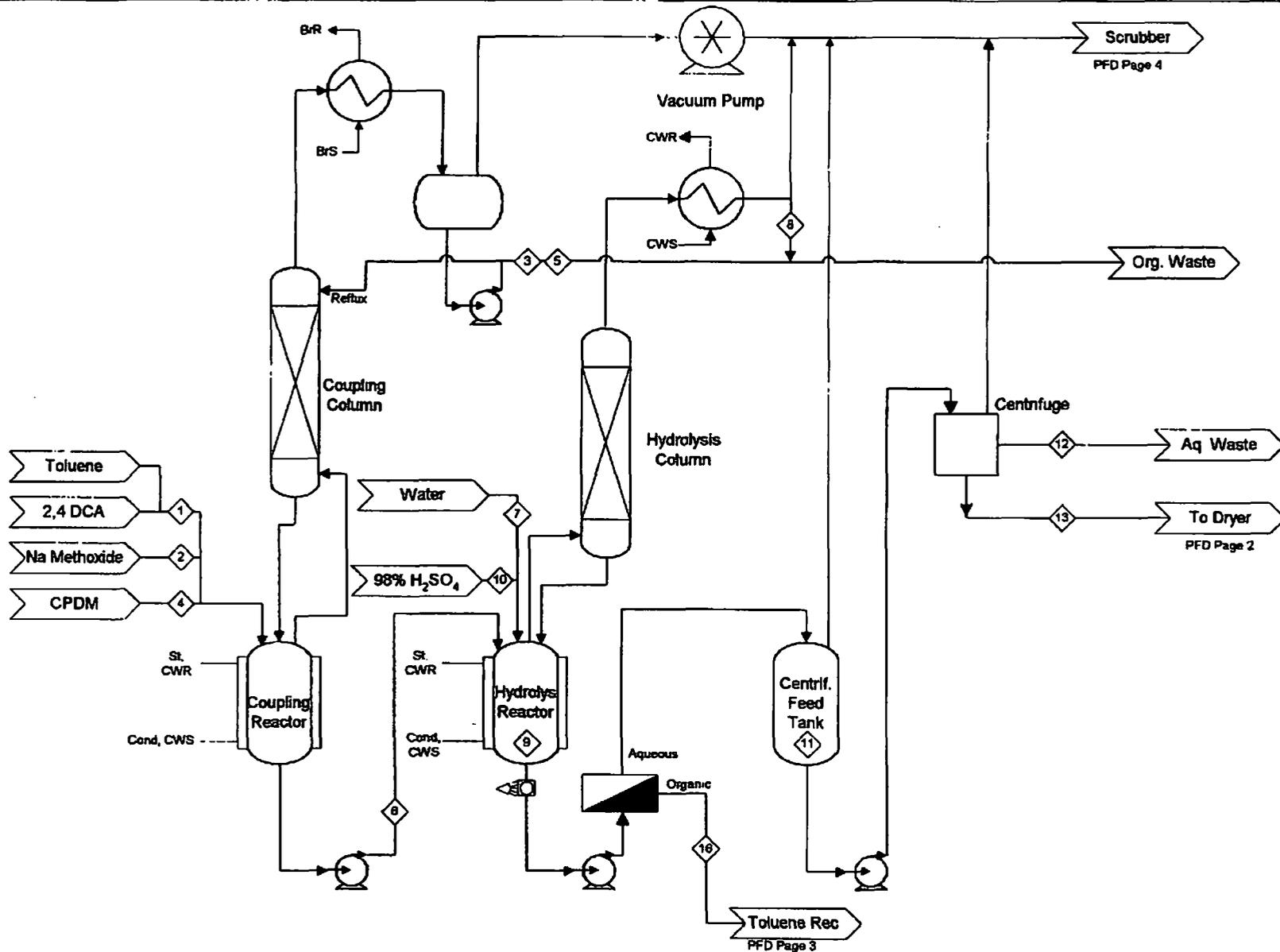
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	Title: Cyclanilide 90946 Process Flow Diagram Page 1 of 4 Pages		
	Drawn: DCG	Scale: None	Date: 11/16/99



Title: Cyclanilide 90946 Process Flow Diagram
Page 1 of 4 Pages

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Rhone Poulenc RPA 90946 (Cyclanilide)

Heat & Mass Balance

R.P. Basis 0.53 gallons (2 L)
 Cedar Basis 2,400.00 gallons (3,000 per train x 2 trains)

Assumptions:

1. Process overall 80% O.S.T. 6. ---
2. 0.5% Material Loss through centrifugation 7. ---
3. Centrifuge discharge @ 12% LOD 8. ---
4. Centrifugation Cycle=45 minutes @ 300 lb./plow 9. ---
5. Dryer discharge at 0.5% LOD 10. ---

Summary of Results	
Final Product lb/bx:	1,864 lb
Limiting Cycle Time:	18.1 hours
Final Product lb/day:	2,471 lb/day

\$ 4.05 /lb to make \$10k/day

Stream No.	Description	COUPLING REACTION						HYDROLYSIS REACTION			ACIDIFICATION	
		1	2	3	4	5	6	7	8	9	10	11
		Initial Charge	Na Methylate Sofn	Azeo Distillat'n	CPDM Charge	Rxn MeOH-Distillat'n	Coupling Product	Water Charge	Rxn MeOH-Distillat'n	Hydroly's Product	H ₂ SO ₄ Charge	Final Product Slurry
Component	MW											
Raw Materials												
CPDM	158.10				1,576.6							
2,4 DCA	162.00	1,632.7										
NaOCH ₃	54.00		592.9									
MeOH	32.00		1,778.7	1,778.7								
H ₂ O	18.00							10,554.7		10,554.7	19.0	10,552.7
NaOH	40.00							213.9				
H ₂ SO ₄	98.00										454.9	
Toluene	92.15	13,752.9		674.7			13,078.2			13,078.2		
(By) Products												
Na-CPMPA	310.10						3,030.6					
MeOH	32.00					638.2			312.7			
Na-RPA 90946	296.10									2,749.1		
RPA 90946	274.10											2,341.2
Na ₂ SO ₄	142.00										659.2	659.2
Others	---						60.6			137.5	187.3	
Stream Weight, lb/batch		15,385.6	2,371.5	2,453.3	1,576.6	638.2	16,169.4	10,768.6	312.7	26,519.4	1,320.4	13,553.1
Stream Volume, gal (ft³)		2,130.6	301.3	362.6	165.0	96.8	2,239.1	1,292.8	47.4	3,436.7	121.9	1,627.0
Temperature, °F		77.0	77.0	146.3	68.0	148.5	230.0	77.0	212.0	68.0	77.0	77.0
Pressure, psia (torr)		14.7	14.7	(400)	14.7	14.7	14.7	14.7	14.7	14.7	14.7	14.7
Density, g/cc (lb/ft³)		0.87	0.95	0.81	1.15	0.79	0.87	1.00	0.79	0.93	1.30	1.00
Viscosity, cP (cSt)												
Molar Yield (Overall)							98.0%			95.0%		92.0%

Rhone Poulenc RPA 90946 (C)
Heat & Mass Balance

R.P. Basis 0.53
 Cedar Basis 2,400.00

Assumptions:

1. Process overall 80% O.S.T.
2. 0.5% Material Loss through centrifugation
3. Centrifuge discharge @ 12% LOD
4. Centrifugation Cycle=45 minutes @ 300 lb./p
5. Dryer discharge at 0.5% LOD

Stream No.	Description	ISOLATION & DRYING				SOLVENT RECVRY		WASTE			
		12	13	14	15	16	17	XX	XX		
		Mother Liquor Discharge	Wet Prod't to Dryer	Vent from Dryer	Dried Final Product	Toluene to Recycle	Recycled Toluene	Organic Waste	Aqueous Waste		
Component	MW										
Raw Materials											
CPDM	158.10										
2,4 DCA	162.00										
NaOCH3	54.00										
MeOH	32.00										
H2O	18.00	10,271.8	279.5	270.2	9.3	20.9		20.9	10,542.0		
NaOH	40.00										
H2SO4	98.00										
Toluene	92.15					13,078.2	11,636.3	2,116.5			
(By) Products											
Na-CPMPA	310.10										
MeOH	32.00							2,729.6			
Na-RPA 90946	296.10										
RPA 90946	274.10		2,329.5		1,863.6						
Na2SO4	142.00	659.2								659.2	
Others	---					385.4		385.4			
Stream Weight, lb/batch		10,931.0	2,609.1	270.2	1,872.9	13,484.5	11,636.3	5,252.4	11,201.2		
Stream Volume, gal (ft3)		1,312.2		40.5		1,867.8	1,611.8	764.2	1,280.6		
Temperature, °F		68.0	68.0	212.0	212.0	68.0	75.0	68.0	68.0		
Pressure, psia (torr)		14.7	14.7	14.7	14.7	14.7	14.7	14.7	14.7		
Density, g/cc (lb/ft3)		1.00		0.80		0.87	0.87	0.83	1.05		
Viscosity, cP (cSt)											
Molar Yield (Overall)					(68.2%)						

Rhone Poulenc RPA 90946 (Cyclanilide)

Cycle Time Analysis

		<u>Step Cycle Time</u>	<u>Vessel Cycle Time</u>	Rate Limiting Time 18.1 hours
Coupling Reaction	Charge Toluene	<u>0.7</u> [Bulk]	|	
	Charge 2,4 DCA	<u>0.8</u> [Drum]		
	Charge Na Methoxide	<u>0.1</u> [Drum]		
	Distill MeOH/Toluene Azeotrope	3.0		
	Charge CPDM	<u>0.8</u>		
	Distill MeOH	2.0		
	Sample/Results	1.0			$\Sigma =$ 8.4
Hydrolysis Reaction	Charge Water	<u>0.7</u> [Bulk]	|	
	Distill MeOH	3.0		
	Cool to 20°C	<u>1.6</u>		
	Decant Aq. Phase	1.0		
	Discharge Org. Phase	0.5		
	Sample/Results	1.0		
Acidification Reaction	Charge Sulfuric Acid	<u>2.9</u> [Tote]	|	
	Mix	0.5		
	Sample/Results	0.5		
	Transfer	0.5		
Centrifugation	Centrifuge Batch	<u>5.8</u>	|	$\Sigma =$ 18.1
Drying	Charge Batch	1.0	|	
	Dry Batch	8.0		
	Packout	1.5			$\Sigma =$ 10.5
Note:	<u>nn.n</u> indicates calculated value, otherwise value is estimated		Total Batch Time Req'd	37.0 hours



facsimile transmission

cc: ~~Jimston~~
~~David Gussroy~~

Please file

To: Allen Malone Fax: 9-1-901-521-0789

From: Geoff Pratt Date: 11/18/99

Re: Letter of Intent Cyclanilide Pages: 5

Phone: 901-684-5373 Cc: R Tomblin

J. Mancini

C. McGee

Urgent For Review Please Comment Please Reply Please Recycle

Dear Allen,

We have had extensive discussions with Rhone Poulenc regarding the toll manufacture of Cyclanilide aka (1-(2,4-dichlorophenylaminocarbonyl)-cyclopropane carboxylic acid) from 2,4-Dichloro aniline (2,4-DCA), and cyclopropane-1,1-dicarboxylic acid dimethyl ether (CPDM). The product is a crop protection chemical and as such is EPA registered.

We have begun preparations to manufacture the product in the Fall of 2000. We have confidential technology disclosures and have agreed to the economics.

Because the contract preparation and approval process at Rhone Poulenc is so ponderous they have asked for our help in formulating a letter of intent to keep the process moving and perhaps jump start the contract drafting procedures.

R-P will supply the 2,4-DCA, and CPDM. Sodium methoxide will be purchased by Cedar or R-P depending on who can get the best deal. The rest of the raw materials will be purchased by Cedar. Cedar will bill R-P for any raw material used at cost. The current estimated cost including sodium methoxide is \$3.56 / kg Product.

We will agree on target usage factors for 2,4-DCA and CPDM and adjust based on demonstrated usage after the first production campaign. After that we will be allowed a 3.5% plus or minus deviation. Excess usage beyond the range is to Cedar's account. Savings from lower usage beyond the range is to be shared equally.

Cedar Chemical Corporation

5100 Poplar Avenue, Ste 7311

Memphis, TN 38137

901-684-5371

Waste information is still pending and we will determine this cost to be passed through based on the data.

We have estimated a capital cost of \$750M which R-P would not pay unless they terminate the contract early. Amortization is over the three year contract and 500 Mtof product.

The contract should be evergreen after the three years with one year increments and one year notice. Volume commitments should be made on July 1 of each year.

The technology has been practiced by Huls (Creanova) in Europe and we will get data on their experience together with technical help from R-P.

R-P will supply 2,4-DCA and 70 MT of CPDM will come from Huls in the second, and fourth quarters of 2000. We will produce 80-100 MT Cyclanilide in the fourth quarter of 2000. We will produce 160MT in quarters 2,3 of 2001. This will depend on the supply of strategic raw materials from R-P.

Pricing for the processing only is \$8.00 /kg for the first run of 80-100 MT, \$7.00 for subsequent runs of 150-200 MT duration. \$6.50 for runs of greater than 200 MT.

Attached is a secrecy agreement which will give you data on the Company names etc. Will appreciate you drafting a LOI for us.

Geoff



file

Facsimile Transmittal

*cc
Jim
D
Don B. 11
Don 10/27*

To: Chris McGee Fax: 9-1-870-3795

From: Geoff Pratt Date: 11/18/99

Re: Cyclanilide Pages: 1

Phone: 901-684-5373 Cc: R Tomblin

D Guffey
J Rone

Urgent For Review Please Comment Please Reply Please Recycle

Dear Chris

R-P has asked that we keep December 15, and 16 open for the Cyclanilide meeting. They will contain the exact data shortly.

They will need the secrecy agreement to arrive early next week. I have already approved a draft and therefore expect to sign and return an original the day that I receive it.

The tech package from Huls should arrive early in the following week.

One kilo samples of 2,4-DCA and CPDM will be air shipped tomorrow and drum quantities will follow by boat.

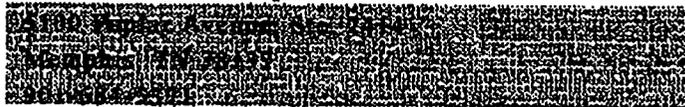
We agreed to have preliminary P&ID's at the meeting with Pierre, hopefully the Huls data will arrive in time and will contain something useful.

I am drafting a Letter of Intent as agreed at our October meeting with Serge and Hans.

Regards

Geoff

Cedar Chemical Corporation



Please
File



Internal Correspondence

To: Peter Fields
CC: C. McGee, J. Rone
From: David C. Guffey
Date: 22 November 1999
RE: Cyclanilide 90946 Project—Projected Waste Costs

Please be advised that we are currently investigating a new project for Rhone-Poulenc Agro, Cyclanilide 90946, with a projected startup of mid next year. Following are the preliminary worst-case waste figures based on a 15 hour cycle time with a 2,330 lb/batch payload:

Organic Waste:

<u>Component</u>	<u>Daily Prod'n</u> (lb/day)	<u>% of Stream</u>	<u>Est. Volume</u> (gal/day)
Water	41.9	0.4	5.0
Toluene	4,223.1	40.3	582.7
Methanol	5,459.2	52.0	829.6
Others (Heavies)	770.7	7.3	(Solid)

Aqueous Waste:

<u>Component</u>	<u>Daily Prod'n</u> (lb/day)	<u>% of Stream</u>	<u>Est. Volume</u> (gal/day)
Water	21,289.8	92.3	2555.8
Sodium Sulfate	1781.5	7.7	Disp. Solid

Please estimate waste costs on a daily basis for this project and disposal options.



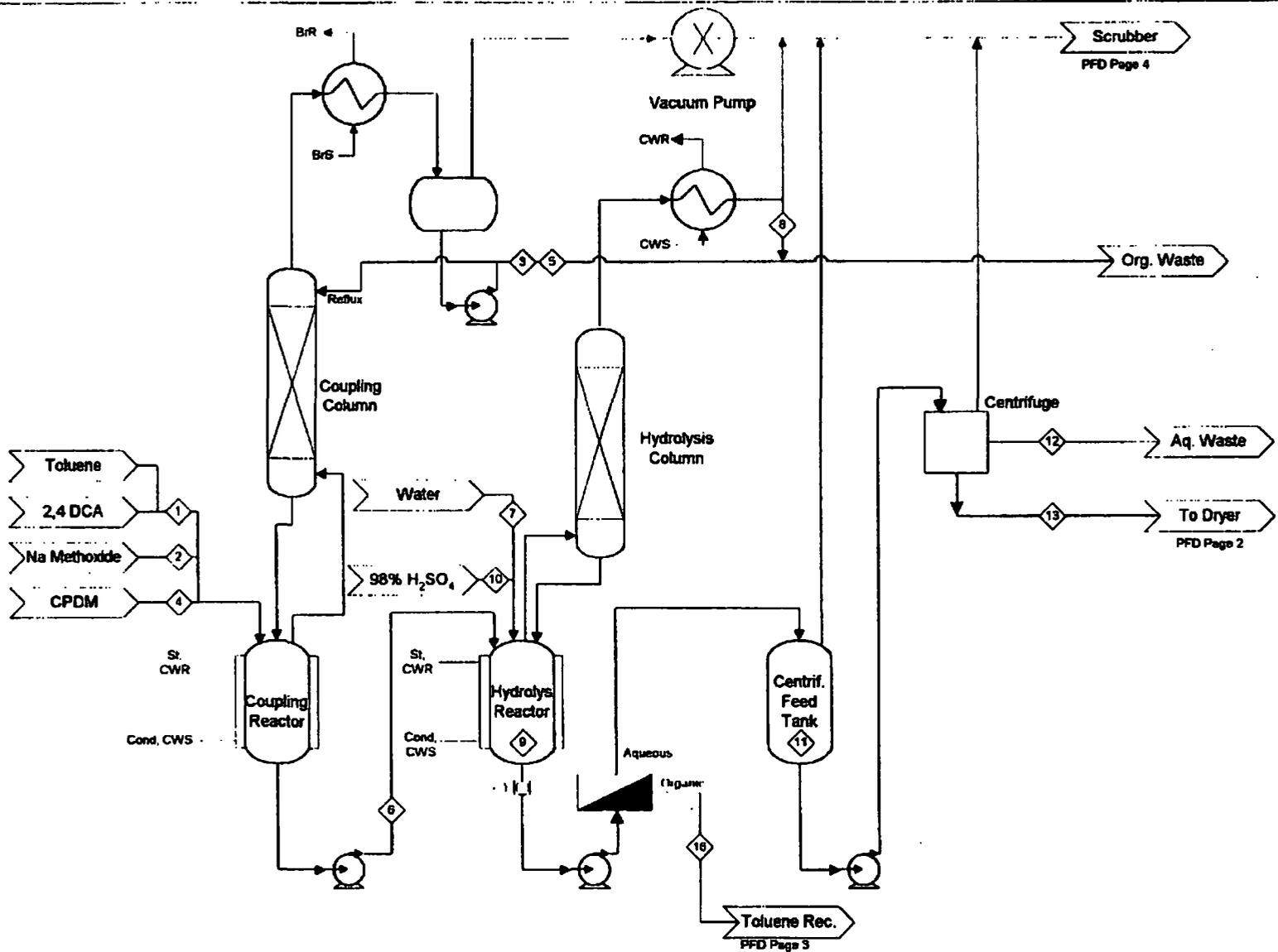
Please File

Internal Correspondence

To: C. McGee, J. Rone
CC: file
From: David C. Guffey
Date: 18 November 1999
RE: PRELIMINARY Rhone Poulenc Cyclanilide 90946 PFD/Mass Balance

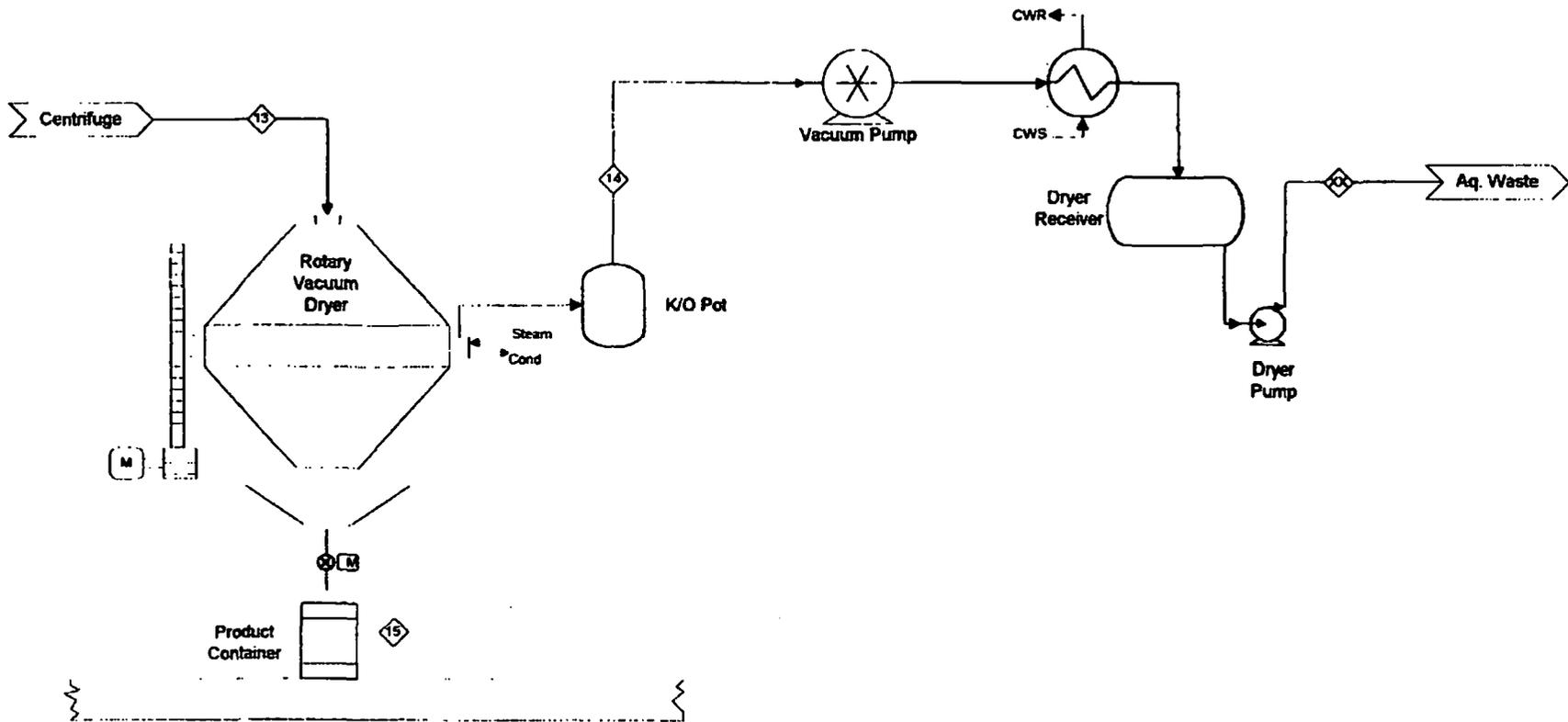
Attached is the preliminary PFD and Mass Balance for the subject project for your review. Please note the following revisions since the last publication of the PFD/MB:

1. Process to be run in Unit 1 instead of Unit 5
2. Coupling Reactor must be kept dry at all times requiring Hydrolysis and Acidification to be done in downstream vessels.
3. Toluene must be anhydrous—requires addition of a molecular sieve.
4. Earlier revisions of mass balance used 6.0 mol Water / mol of Na-CPMPA. Clean copy of RP data shows 60.0 mol Water / mol Na-CPMPA required. This means the Coupling Reactor batch must be shorted to make room for water charge in Hydrolysis Reactor. It may make sense to make full reactor batches of the Coupling Intermediate from two (2) reactors and have three (3) reactors in Hydrolysis/Acidification service—essentially making the Coupling Intermediate an isolated intermediate.
5. Cycle time calculation assumes Hydrolysis Reactor is also Centrifuge Feed Tank—I have to still work out the equipment details.
6. New vacuum dryer is shown as dryer for the process until details of the Nauta dryers is available.
7. Aqueous waste disposal is unknown at this time—since it is salt laden (~6% NaSO₄), I assume we will dispose outside of our water treatment system.
8. Toluene recovery is still a mystery. I have taken a “best guess” approach. I am assuming the MeOH/Toluene Azeotrope is a waste stream as is all the MeOH generated.



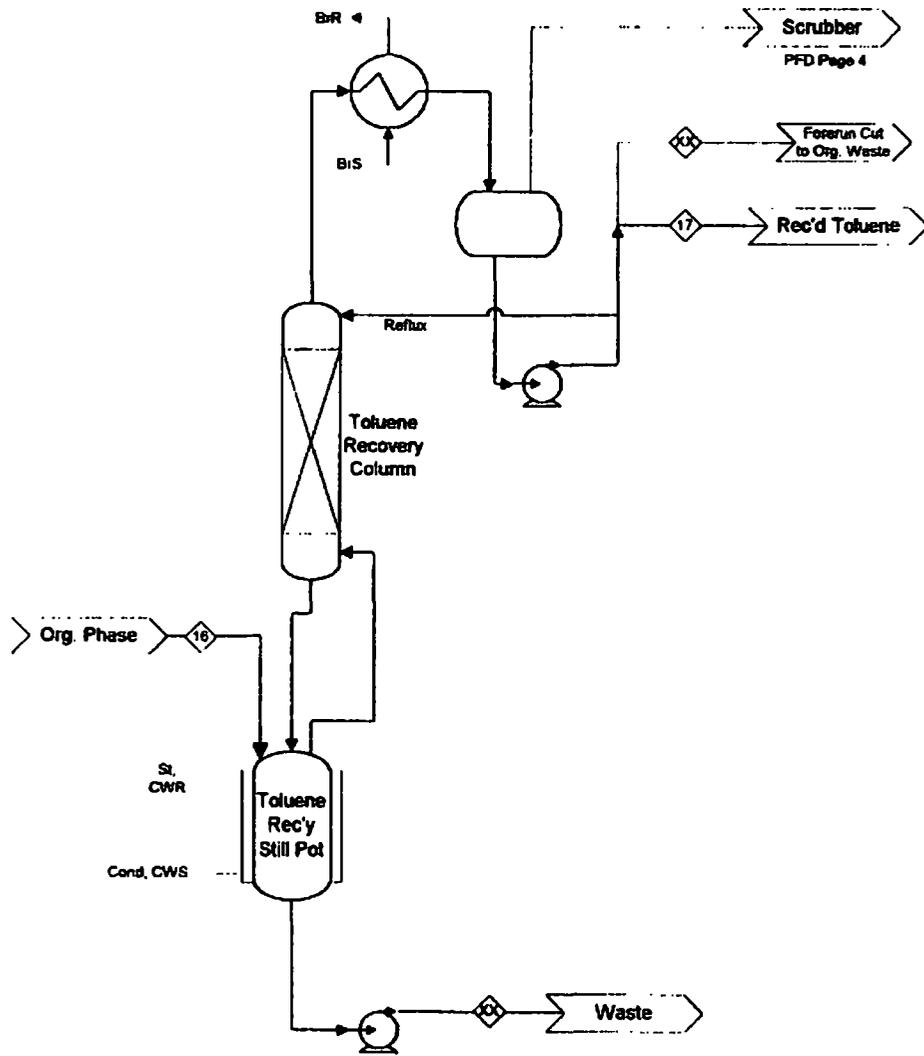
Title: Cyclanilide 90946 Process Flow Diagram
Page 1 of 4 Pages

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Title: Cyclanilide 90946 Process Flow Diagram
Page 2 of 4 Pages

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	Title: Cyclanilide 90946 Process Flow Diagram Page 3 of 4 Pages			
	Drawn: DCG	Scale: None	Date: 11/16/99	Rev: A

SECRETY AGREEMENT

This Agreement is made and entered as of the date last below written by and between:

Rhône-Poulenc Agro Matières Actives, a French "société en nom collectif" with a capital of 640 250 000 French Francs with its registered office at 14/20, rue Pierre Baizet - 69009 LYON - FRANCE, registered in Lyon under number B 399 135 532,

Represented by Mr Hans MOSER, Strategic Purchasing Director, Business Development,

Hereinafter referred to as "RPAMA",

as the first Party,

And

Cedar Chemical Corporation, a company duly organised under --- law with offices at 5100 POPLAR Avenue, MEMPHIS, TN 38137 USA,

Represented by Mr Geoffrey L. PRATT, Vice President

Hereinafter referred to as "CEDAR",

as the second Party,

Witnesseth:

- ◆ WHEREAS, RPAMA and CEDAR have entered into a certain Secrey Agreement dated as of May 14th, 1999 in relation to the exchange of technical and proprietary information of a confidential nature, including manufacturing and formulation know-how for the manufacture and formulation of Cyclanilide or CS-DCA;
- ◆ WHEREAS, pursuant to a certain Patent and Technical License Agreement dated July 12th, 1999 RPAMA has obtained the right from DEGUSSA-HÜLS to divulge certain valuable technical and proprietary information of a confidential nature of DEGUSSA-HÜLS origin relating to the production of CS-DCA (hereinafter referred to as "the DEGUSSA-HÜLS Confidential Information") to RPAMA's toll manufacturers provided such toll manufacturers agree to be bound by the confidentiality and non-use obligations under the Patent and Technical License Agreement;

- ◆ WHEREAS, RPAMA and CEDAR are interested in exchanging the DEGUSSA-HÜLS Confidential Information for the purpose of evaluating their interest to enter into a toll manufacturing or purchase agreement, or any similar agreement, of CS-DCA (hereinafter "the Purpose").

NOW, THEREFORE, in consideration of the premises and the terms and conditions herein contained the Parties have agreed as follows:

Clause 1. DEFINITIONS

"Affiliate(s)" means any entity that directly or indirectly, through one or more intermediaries, now or hereafter controls or is controlled by or is under common control with a Party hereto, except in countries where ownership of a majority or controlling interest by a foreign entity is not permitted by law, rule or regulations, the parent's direct or indirect voting interest may be less than a majority or controlling interest.

"Control" (including the terms "controls", "controlled by", "controlling" and "under common control with") are understood as meaning the possession, direct or indirect, of the power to direct or cause the direction of the management and policies of a person or entity whether through the ownership of voting security, by contract or otherwise.

"CEDAR" means CEDAR and its Affiliates.

"DEGUSSA-HÜLS" means DEGUSSA-HÜLS and its Affiliates.

"RPAMA" means RPAMA and its Affiliates.

"Third Party" means any Party other than RPAMA, CEDAR, DEGUSSA-HÜLS and/or their Affiliates.

Clause 2. SECRECY

2.1. During the term of this Agreement, CEDAR agrees to hold in trust and confidence and not to disclose to any Third Party, nor to use for its own purposes other than the toll manufacture of CS-DCA for and on behalf of RPAMA any and all of the DEGUSSA-HÜLS Confidential Information disclosed to it by RPAMA under this Agreement.

- 2.2. CEDAR agrees to make available such DEGUSSA-HÜLS Confidential Information only to those of its employees who need to have access to it to carry out the toll manufacture of CS-DCA and shall cause such employees to be bound by the confidentiality and non-use obligations provided herein.
- 2.3. CEDAR shall be responsible for any breach of the confidentiality and non-use obligations provided herein by such employees, whether or not such employees continue to be employees of CEDAR.
- 2.4. CEDAR agrees to return promptly, free of charge, all of the DEGUSSA-HÜLS Confidential Information which is in written form to RPAMA at any time, upon RPAMA's request.
- 2.5. Any documents, drawings, electronic media and other material containing any part of the DEGUSSA-HÜLS Confidential Information shall be destroyed by shredding into pieces or returned to RPAMA upon expiration or termination of this Agreement.
- 2.6. CEDAR's obligations of non-disclosure does not apply to such information and document, which:
 - at the time of the disclosure are generally available to the public; or
 - after disclosure become generally available to the public through no fault of CEDAR; or
 - CEDAR can prove to have been in its lawful possession at the time of disclosure by RPAMA.

Clause 3. LIMITATION OF RIGHT

Nothing herein contained shall be construed as granting to a Party any right, including any license, either express or implied, under any Confidential Information disclosed to a Party by another Party hereunder, except for a license to use the Confidential Information to conduct the evaluation as contemplated by the Agreement.

Clause 4. DURATION

This Agreement shall become effective as from the date of its last signature by the parties hereto. Unless terminated earlier or otherwise extended by mutual agreement in writing, this Agreement shall terminate one (1) year later, except for the confidentiality obligations set forth in Clause 2 which shall survive termination or expiration of this Agreement for a period of five (5) years following termination or expiration under article 6.1 of the Patent and Technical License Agreement dated July 12th, 1999 between RPAMA and DEGUSSA-HÜLS.

Clause 5. AMENDMENT

No amendment or consensual cancellation of this Agreement or any provisions or terms thereof and no extension of time or waiver or relaxation or suspension of any of the provisions or terms of this Agreement shall be binding unless recorded in a written document signed by the Parties. Any such extension, waiver or relaxation or suspension which is so given or made shall be strictly construed as relating to the matter in respect whereof it was made or given.

Clause 6. ENTIRETY

This Agreement contains the entire understanding between the Parties hereto regarding the subject matter hereof, and cancels and supersedes all previous agreements, representations and understandings, written or oral between the Parties hereto regarding the subject matter hereof.

Clause 7. ASSIGNMENT

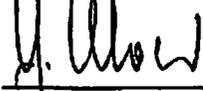
The rights and obligations of this Agreement cannot be assigned to a Third Party by a Party without the prior written consent of the other Party.

Clause 8. APPLICABLE LAW

This Agreement shall be interpreted and construed in accordance with, and its performance shall be governed by French law.

IN WITNESS WHEREOF, the Parties hereto have caused this Agreement to be duly executed as of the day and year last below written.

Rhône-Poulenc Agro Matières Actives



Name: Hans MOSER

Title: Strategic Purchasing Director,

Business Development

Date: 13. 11. 99

Cedar Chemicals Corporation



Name: Geoffrey L. PRATT

Title: Vice President

Date: November 22, 1999

Rhône-Poulenc Agro

**CEDAR Chemical Corporation
Mr Geoffrey L. PRATT
5100 Poplar Ave.
Suite 2414
Memphis, TN 38137
UNITED STATES**

LYON, F 25 November 1999

Réf : fb/SR 191.99

SUBJECT : PROCESS TO PREPARE CYCLANILIDE

Dear Geoffrey,

Following the signature of the secrecy agreement which covers the technical information transmitted by Degussa-Hüls, you will find herewith their technical package describing the process to prepare Cyclanilide (their ref : Degussa-Hüls AG/FC-SI-ME/99-09-08 and the reply to RPA 30/09/99).

Please note that the process will be confirmed by Pierre Le Roy in our meeting in December in the U.S. As we have already discussed there are at least two main points of this package in contradiction with the merit note of RPA :

- replacement of sulfure acid by formic acid
- inversion of the reactant addition

That could significantly affects the overall yield of the reactions.

Best regards.


Serge RAVET
Toll manufacturing manager

Reply to the letter from Rhone-Poulenc-Agrevo dated 30.09.99

- Safety: No differential thermo analyses (DTAs) of the individual pure substances were carried out.

135 - 144°F

2,4-DCA melts at 59-62°C without any degradation or evolution of heat. Our experience regarding the storage of molten 2,4-DCA from the Tolochimie company shows that, at least in the first consignment, the proportion of chloride was around 80 mg/kg. This led to corrosion of the high-grade steel tank. However, this elevated chloride content was, at least to a great extent, already present in the raw material delivered.

In its pure form, **CDM** undergoes perceptible degradation at 120°C and higher, forming a high-viscosity polymer. No evolution of heat was observable.

274 - 379°F

CSDCA melts without degradation at 190-193°C.

- Stainless steel = DIN EN 10088: 1.4571 = AISI 316 Ti

Glass line = Pfaudler WWG

- A mass balance is described in item "3.3 Recipe"
The term "products" is possibly incomprehensible and should be replaced by "effluents".

Additional information regarding "3.2 Processing steps, process description"

Step 1 in R 1: duration 1h

Step 2 in R 2: duration 8h

Step 3 in R 3: duration 8h

Step 4 in R 4: duration 2.5h

Step 5 in R 5 and centrifuge: 8h

Step 6 in drier: 8h

Step 7 in R 6: 5h

Step 8 in R 7: 8h (This reactor perhaps has to be fitted with an additional evaporator.)

**Process for preparing
1-(2,4-dichloroanilincarbonyl)
cyclopropanecarboxylic acid**

(cyclanilide)

**Degussa-Hüls AG
Werk Lülsdorf
Feldmühlestraße
D-53859 Niederkassel**

Contents

Abbreviations

Administrative information

Chapter I: Raw materials

- 1.1 Physical data
- 1.2 Specifications
- 1.3 Impurities
- 1.4 Suppliers

Chapter II: Apparatus

- 2.1 Technical equipment
- 2.2 Flow sheet
- 2.3 Safety

Chapter III: Procedures

- 3.1 Chemical basis
- 3.2 Processing steps, process description
- 3.3 Recipe

Chapter IV: Products

- 4.1 Physical data
- 4.2 Specifications
- 4.3 Impurities
- 4.4 Analytical methods

Chapter V: Patents

- Patent

Abbreviations

Cyclanilide / CS-DCA	1-(2,4-dichloroanilincarboxyl) cyclopropane-carboxylic acid
R	reactor
T	tank
NM	sodium methoxide
CDM	dimethyl cyclopropane-1,1-dicarboxylate
RM	reaction mixture

Degussa-Hüls

Administrative information

Degussa-Hüls AG
Weißfrauenstr. 9
D-60287 Frankfurt

Degussa-Hüls AG
Werk Lülsdorf
Feldmühlestraße 1
D-53859 Niederkassel

Sodium methoxide 30%	Appearance: Total alkali: NaOMe eff.:	colourless liquid 29.5 – 31.0% 29.0 – 30.5%
Toluene	Appearance: Content: Water	colourless clear liquid ≥ 99.8% ≤ 200 ppm
NaOH 20 %	Appearance: Content:	clear colourless slightly viscous liquid 19.5 – 20.5%
Water	Appearance: Hardness: pH: COD: AOX:	clear colourless liquid < 1 6 – 7.5 < 30 ppm < 20 ppm
Formic acid	Appearance: Content: Colour index:	clear colourless liquid 84 – 86% < 10

Degussa-Hüls

1.4 Suppliers

Raw materials are identified by the supplier's documents. In the case of external suppliers, certificates of analysis of each batch are requested. Furthermore, each delivery is subjected to a raw material testing. In the case of internal suppliers, an analysis of the batch is requested. This analysis is carried out in the quality control laboratory.

Chapter II: Apparatus

2.1 Technical equipment

0.7 m³ Stainless-steel reactor

Heating:
Stirrer:
Solids metering funnel

R 1

135 gal

6 bar steam - 87 psi (Δ or G?)
anchor stirrer

2.0 m³ Stainless-steel reactor

Heating:
Stirrer:
Column:

R 2

528 gal

? 6 bar steam
MIG stirrer
mounted on the reactor, approximately 20
theoretical plates

4.0 m³ Stainless-steel reactor

Heating/cooling:
Stirrer:
Column:

R 3

1057 gal

? 6 bar steam/water
MIG stirrer
mounted on the reactor, approximately 20
theoretical plates

5.0 m³ glass-lined reactor

Heating/cooling:
Stirrer:
pH measurement:

R 4

1321 gal

6 bar steam/water
blade stirrer
probe in the submerged tube of the reactor

1.3 m³ glass-lined reactor

Stirrer:

R 5

343 gal

impeller stirrer

Heine centrifuge

Type:
Volume:
Speed:

vertical perforated basket centrifuge
160 l
0 - 1000 rpm

1.6 m³ centr. receiver

T 3 423 gal

pH measurement:

probe in the circulation line

1 m³ shuffle drier

264 gal

Heating/cooling:
Stirrer:

6 bar steam/water
blade stirrer

0.7 m³ Stainless-steel reactor

R 6 185 gal

Heating/cooling:
Stirrer:
Column:

6 bar steam/water
MIG stirrer
mounted on the reactor, approximately 10
theoretical plates, removal of water by phase
separation

0.7 m³ Stainless-steel reactor

R 7 185 gal

Heating/cooling:
Stirrer:
Column:

6 bar steam/water
anchor stirrer
mounted on the reactor, approximately 10
theoretical plates

4 m³ Stainless-steel reactor

T 8 1057 gal

Stirrer:
pH measurement:

anchor stirrer
probe in the circulation line of the reactor

4 m³ Stainless-steel tank

T 4 1057 gal

4 m³ Stainless-steel tank

T 2

4 m³ Stainless-steel tank

T 6

15 m³ Stainless-steel tank

T 1 3963 gal

15 m³ Stainless-steel tank

T 7

Heating:	electric
15 m ³ Stainless-steel tank	T 5 <u>3963 gal</u>
Activated charcoal filter	one-layer pressure filter
Volume:	800 l <u>211 gal</u>
Pressure:	6 bar maximum
Sieve	separator (gyratory riddle)
Mesh size	0.5 mm

Degussa-Hüls

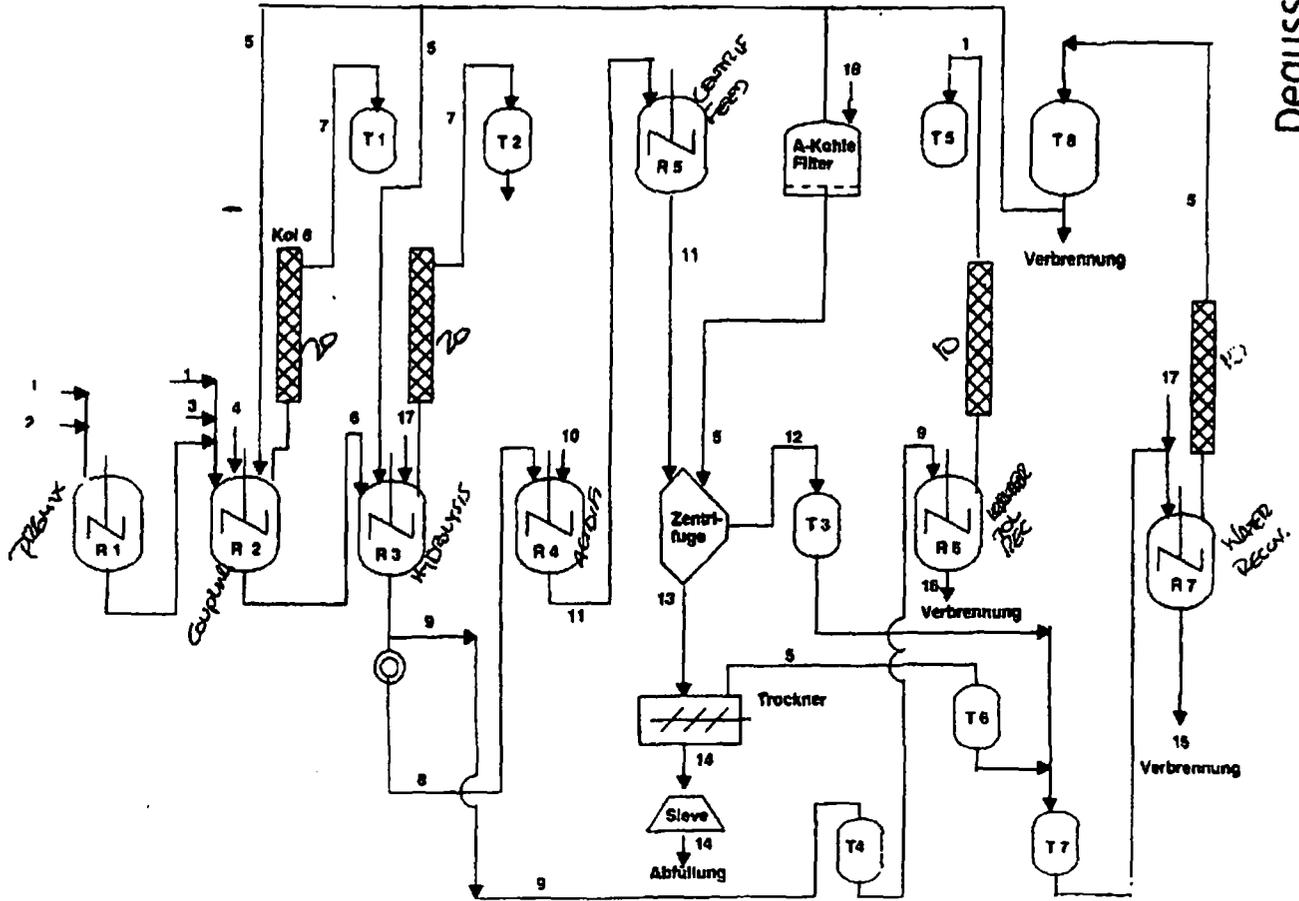
Description of the plant

The plant used for producing cyclanilide is located at the Lülisdorf site, Feldmühlstraße, D-53859 Niederkassel. The organizational code of the Lülisdorf pilot plant is: GB FC WL P 3.

The Lülisdorf pilot plant is designed and suitable for process development and the production of, inter alia, intermediates for agrochemicals. The raw materials required for producing cyclanilide may be used in the Lülisdorf pilot plant, since the appropriate official authorization has been granted.

The Lülisdorf pilot plant is equipped with 0.7 – 5 m³ V4A and glass-lined reactors, with stainless-steel columns, with centrifuges and 1 m³ driers for carrying out the operations.

2.2 Flow sheet



Degussa-Hüls

1 Toluol
2 2,4-DCA
3 CDM
4 NM

5 H₂O
6 Reaktionsgemisch
7 MeOH/Toluol
8 Na-CS-DCA/H₂O

9 Toluol /HS
10 Ameisensäure
11 CSDCA/H₂O/NaOCHO
12 H₂O/NaOCHO

13 CSDCA feucht
14 CSDCA
15 NaOCHO

16 HS
17 20% NaOH
18 A-Kohle

T = Tank
R = Reaktor

1 Toluene	5 H ₂ O	9 Toluene/residue	13 cyclanilide moist	16 HB	T = Tank
2 2,4-DCA	6 Reaction mixture	10 Formic acid	14 cyclanilide	17 20% NaOH	R = Reaktor
3 CDM	7 MeOH/toluene	11 cyclanilide/H ₂ O/NaOCHO	15 NaOCHO	18 Activated carbon	
4 NM	8 Na-cyclanilide/H ₂ O	12 H ₂ O/NaOCHO			

2.3 Safety:

During the metered addition of NM, the reaction mixture in R 2 passes through a phase of high viscosity. Towards the end of the reaction, the viscosity decreases again.

2,4-Dichloroaniline: Toxic, environmentally hazardous (German Regulation on Hazardous Substances)

Extreme care with respect to work safety is required when working with 2,4-DCA, since the material is classified as being toxic and environmentally hazardous. Efficient exhausting devices are required. Before leaving the plant, all process water has to be examined for 2,4-DCA.

Sodium methoxide 30%: Toxic, corrosive (German Regulation on Hazardous Substances)

Sodium methoxide solution must not come into contact with water, since the sodium hydroxide formed cleaves CDM.

Toluene: Highly flammable (German Regulation on Hazardous Substances)

See specifications for water in Chapter 1

NaOH 20% Corrosive (German Regulation on Hazardous Substances)

Formic acid Corrosive (German Regulation on Hazardous Substances)

The handling of formic acid requires considerable care. Contact between the skin and formic acid results, within a very short period of time, in severe cauterization which heals only very slowly.

Chapter III: Procedures

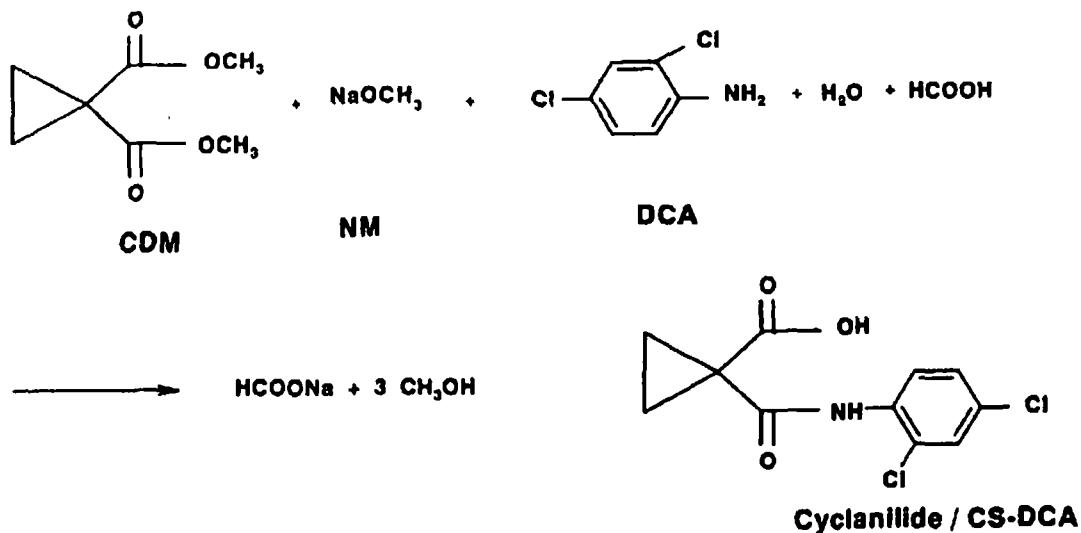
3.1 Chemical basis

Cyclanilide

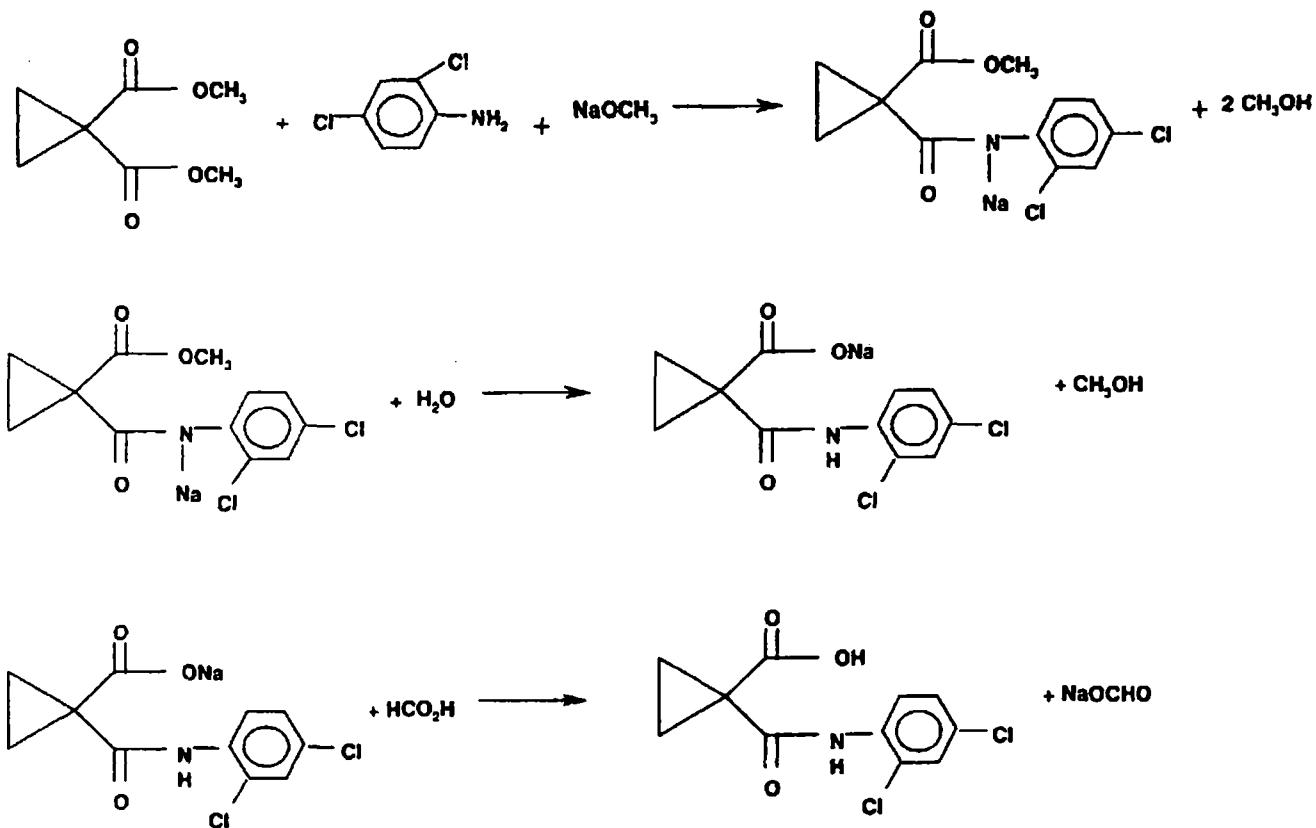
Chemical formula:	$C_{11}H_9Cl_2NO_3$
Molecular weight:	274.1 g/mol
Chemical name:	1-(2,4-dichloroanilino)carbonylcyclopropane-1-carboxylic acid
Alternative chemical name:	1-[[[(2,4-dichlorophenyl)amino]carbonyl]cyclopropane-carboxylic acid
CAS number:	113136-77-9

After addition of stoichiometric amounts of NM, CDM reacts on one carboxyl group with 2,4-dichloroaniline to give the amide. The other ester group is, after addition of water, hydrolysed and the target product is precipitated out using formic acid, filtered and dried.

Overall equation:



Single steps:



3.2 Processing steps, process description

Step 1 in R 1:

Material	Amount
Toluene	300 kg
2,4-Dichloroaniline	200 kg

R 1 is charged with 300 kg of toluene. 200 kg of 2,4-DCA are then added into R 1. The mixture is stirred at 35-40°C for 20-30 min. The solution is then ready for use.

Step 2 in R 2:

Material	Amount
Toluene/ 2,4-DCA from R 1	500 kg
Toluene	700 - 750 kg
CDM (100%)	200 kg
NM 30	252 kg
Water	500 - 550 kg

R 2 is charged with the toluene/DCA solution, the toluene and the CDM. The pressure is then reduced to 350-360 hPa and the bottom is heated to 56-59°C. The NM 30 is then metered in at a steady rate over 2-2.5 h. During the metered addition of NM, an MeOH/toluene azeotrope is taken off at the top of the column. After the end of the metered addition of NM, distillation is continued until the bottom temperature has reached 76°C. The bottom is then cooled to 60-65°C. Water is added to R 2. The mixture is stirred for 15-20 min. The batch is subsequently transferred to R 3.

NaOCH_3 1.400 mol
 CDM 1.265 mol
 2,4-DCA 1.235 mol
 H_2O 29.167 mol

NaOCH_3 : CDM = 1.107
 NaOCH_3 : 2,4-DCA = 1.134
 NaOCH_3 : H_2O = 0.049
 CDM : 2,4-DCA = 1.024
 H_2O : 2,4-DCA = 23.617

Step 3 in R 3:

Material	Amount
RM from R 2	about 1750 kg
Water	450 - 500 kg

R 3 is filled with the reaction mixture from R 2.

The water is charged into R 3.

R 3 is heated at reflux under atmospheric pressure for 3 h.

When the temperature at the top falls below 70°C, the low boilers are distilled off at the top.

During this operation, the temperature at the top is kept below 70°C.

The RM is then cooled to < 50°C.

pH of the lower phase: > 11.5. If this is not the case, the pH is adjusted using a little NaOH and the hydrolysis is repeated.

A phase separation is carried out. The lower phase is transferred to R 4. The upper phase is transferred to R 6.

Step 4 in R 4:

Material	Amount
Lower phase from R 3	about 1300 kg
Formic acid	about 100 kg

The lower phase of the RM from R 3 is transferred to R 4.

R 4 is cooled to < 25°C, and this temperature is maintained during the precipitation.

Formic acid is charged into R 4 over a period of 1-2 h. The pH is adjusted to 3.8-3.9, and cyclanilide precipitates out of the aqueous RM.

Step 5 in R 5 and centrifuge:

Material	Amount
RM from R 4	1400 kg
Water	about 600 kg

The suspension from R 4 is transferred to R 5 and filtered using the centrifuge. The filtercake on the centrifuge is washed with water.

The filtercake is centrifuged and scraped off.

Step 6 in drier:

Material	Amount
Moist filtercake from the centrifuge	about 350 kg

The moist filtercake from the centrifuge is charged into the drier.

The cyclanilide is dried at 90-95°C and < 50 hPa for 4 h.

--- > P 37 last

Step 7 in R 6:

Material	Amount
Upper phase from R 3	about 930 kg

The upper phase from R 3 is charged into R 6 and the toluene is distilled off. The distillate can be recycled into the reaction. The residue is disposed off by incineration.

Step 8 in R 7:

Material	Amount
Filtrate from centrifuge	about 1200 kg
Wash filtrate from the centrifuge	about 650 kg
NaOH 20 %	about 100 kg

Filtrate, wash filtrate from the centrifuge and NaOH 20 % are charged into R 7. Water is distilled off until solid residue remains. This is disposed off by incineration.

In-process control

1. The amount of distillate (azeotrope MeOH/toluene) obtained during the reaction in R 2 has to be > 400 kg.
2. pH of the lower phase after the hydrolysis in R 3: > 11.5
3. 2,4-DCA concentration in the outflow of the activated carbon filter < 30 ppm
4. Melting point of the filtercake on the centrifuge: > 189°C
5. Amount of moist solid on the centrifuge: > 330 kg

3.3 Recipe

	Raw materials	[kmol]	[kg]	[l]
1	Toluene	-	1040	(1200 l)
2	DCA	1.2342	200	
3	CDM (100%)	1.265 (+ 2.5 %)	200	(174 l)
4	NM 30 (75.6 kg 100 %)	1.397 (+ 13.2 %)	252	(260 l)
5	H ₂ O	-	about 1000	(1000)
10	Formic acid (85 %)	1.94	about 105	(about 89 l)
5	Wash H ₂ O (3 centr., in each case 3 x 60-80 ltr.)		about 650	(about 650 l)
17	NaOH (20 %)	0.5	about 100	(about 90 l)
		Sum:	about 3547	
	Products			
16	Toluene bottoms for incineration (from R 6)		about 32	
14	Cyclanilide (86 % yield) (100% yield 338.3 kg)	1.08	290	
1	Toluene distillate		about 920	
7	Azeotrope toluene/MeOH		about 440	
5	H ₂ O distillate		about 1710	
15	Na formate (from R 7)		about 155	
		Sum:	about 3547	

Naturally, the batch sizes laid down in this description are adapted to the equipment in the plant. Batch sizes can be modified as long as the ratios are maintained. Which amounts can be varied and to what extent is described under the individual processing steps. These data are based on experience gained in the plant. There are no experiences or research results on more substantial changes. Accordingly, it cannot be guaranteed that such changes would be successful.

Environmental statement:

All steps carried out in the Lülsdorf pilot plant in connection with the process for preparing cyclanilide are in accordance with current legislation.

Chapter V: Patents

Patent:

- | | |
|------------|---|
| DE 4114733 | „Verfahren zur Herstellung von substituierten Malonesteraniliden und Malonsäure-monoaniliden“ |
| EP 0512211 | „Verfahren zur Herstellung von substituierten Malonesteraniliden und Malonsäure-monoaniliden“ |
| US 5334747 | „Method of preparing substituted malonic-acid-anilides and malonic-acid-monoanilides“ |

Rhone-Poulenc RPA 90946 (Cyclanilide)--DeGussa-Huls Technology Basis
Heat & Mass Balance

Summary of Results	
Final Product lb/bx:	1,759 lb
Limiting Cycle Time:	12.7 hours
Final Product lb/day:	3,331 lb/day
Final Product MT/day:	1.5 MT/day
Prod'n w/two Trains:	2.6 MT/day

Assumptions:

- Process overall 80% O.S.T.
- 0.5% Material Loss through centrifugation
- Centrifuge discharge @ 20% LOD
- Centrifugation Cycle=45 minutes @ 400 lb./plow
- Dryer discharge at 0.5% LOD
- All Yield calculations based on DCA
-
-
-
-

Stream No.		1	2	3	4	5	6	7	8	9	10	11
Description		Premix Initial Charge	Coupling Rxtr Charge + Premix	MeOH-Tol Azeo Strip	O/H Charged Back	Intermed Xferred to Hydrol Rxtr	Hydrol Rxtr Water Charge	Hydrol Intermediate	MeOH Distillat'n	AQ Phase to Acidific'n	ORG Phase to Rec'y	Acidific'n Rxtr Acid Charge
Component	MW											
Raw Materials												
CPDM	158.10		1,499.1									
2,4 DCA	162.00	1,499.1	1,499.1									
NaOCH3	54.00		566.7									
MeOH	32.00		1,322.2									
H2O	18.00						7,495.7	7,495.7		7,495.7		
NaOH	40.00							151.9				
Formic Acid	46.03			104.9	104.9				120.9		780.0	749.6
Toluene	92.15	2,248.7	7,683.1	756.3	756.3	7,683.1		7,683.1	874.4		6,811.7	
(By) Products												
Na-CPMPA	310.10					2,940.4						
MeOH	32.00			1,993.9	1,993.9	1,993.9		2,297.3	2,297.3			
Na-RPA 90946	296.10							2,807.7		2,807.7		
RPA 90946	274.10											
NaCHO2	68.01											
Others	---										329.7	
Stream Weight, lb/batch		3,747.9	12,570.3	2,750.2	2,750.2	12,617.4	7,495.7	20,435.7	3,168.7	10,303.4	7,141.5	749.6
Stream Volume, gal {ft3}		519.0	1,596.9	406.5	406.5	1,755.8	899.8	2,529.1	468.4	1,275.2	986.6	76.3
Temperature, °F		100.0	136.0	146.3	145.0	145.0	140.0	77.0	212.0	68.0	77.0	77.0
Pressure, psia (torr)		14.7	14.7	{270}	14.7	14.7	14.7	14.7	14.7	14.7	14.7	14.7
Density, g/cc {lb/ft3}		0.87	0.95	0.81	0.81	0.86	1.00	0.97	0.81	0.97	0.87	1.18
Viscosity, cP {cSt}												
Molar Yield {Overall}												

XYL

72.5
27.5
95
5

Rhone Poulenc RPA 90946 (Cycl.
Heat & Mass Balance

Assumptions:

1. Process overall 80% O.S.T.
2. 0.5% Material Loss through centrifugation
3. Centrifuge discharge @ 20% LOD
4. Centrifugation Cycle=45 minutes @ 400 lb./p
5. Dryer discharge at 0.5% LOD

0.724
ΔQ | 0.736 kg/kg SPEC. (1/2)

Stream No.		CF	Dryer	Packout	Solvent Recovery	Water Recovery	Waste Streams				
Description		12	13	14	15	16	17	18	19	20	21
		Precipit'd Prod't to Centrif.	Wash + ML Disch.	Wet Prod't to Dryer	Dried Final Product	Toluene to Recycle	Recycled Toluene	Water to Recycle	Recycled Water	Organic Waste	Aqueous Waste
Component	MW										
Raw Materials											
CPDM	158.10										
2,4 DCA	162.00										
NaOCH3	54.00										
MeOH	32.00								3247.1		195.4
H2O	18.00	7,495.7	7,779.8	662.8	11.0	10.9		8,442.5	6,974.5	10.9	1,468.0
NaOH	40.00										
Formic Acid	46.03					7804.0	6384.3				
Toluene	92.15					6,844.7	5,386.0			1,415.7	
(By) Products											
Na-CPMPA	310.10										
MeOH	32.00									2,297.3	
Na-RPA 90946	296.10										
RPA 90946	274.10	2,209.2		2,198.2	1,758.5						
NaCHO2	68.01	1,107.5	1,107.5					1,107.5			1,107.5
Others	—					329.7				329.7	1302.9
Stream Weight, lb/batch		10,812.4	8,887.2	2,860.9	1,769.5	7,462.3	6,306.0	9,550.0	6,974.5	4,053.7	2,575.5
Stream Volume, gal (ft3)		1,338.2	987.9			990.7	747.4	1,061.5	837.3	592.9	268.9
Temperature, °F		68.0	68.0	212.0	212.0	68.0	75.0	68.0	68.0	68.0	68.0
Pressure, psia (torr)		14.7	14.7	14.7	(38)	14.7	14.7	14.7	14.7	14.7	14.7
Density, g/cc (lb/ft3)		0.97	1.08			0.87	0.87	1.08	1.00	0.82	1.15
Viscosity, cP (cSt)											
Molar Yield (Overall)		85%									

Rhone Poulenc RPA 90946 (Cyclanilide)—DeGussa-Huls Technology Basis
Cycle Time Analysis

		Step Cycle Time	Vessel Cycle Time
Premix Prep (R-1)	Charge Toluene	0.2 [Bulk]	Σ = 1.5
	Charge 2,4 DCA	0.8 [Drum]	
	Mix/Hold	0.5	
Coupling Reaction (R-2)	Charge Toluene	0.5 [Bulk]	Σ = 10.8
	Charge Premix	0.3	
	Draw Vacuum	0.5	
	Heat to 56-59°C	0.8	
	Charge Na Methoxide	3.0 [Tote]	
	Distill MeOH/Toluene Azeotrope	3.0	
	Cool to 60-65°C	2.0	
	Transfer O/H Back	0.3	
	Transfer to Hydrolysis Rxtr	1.0	
Hydrolysis Reaction (R-3)	Charge Tempered Water	1.2 [Pipeline]	Σ = 12.7
	Heat/Reflux	2.5	
	Distill MeOH	2.5	
	Cool Rxtr <50°C	2.0	
	Sample/NaOH Adjust	2.5	
	Phase Separate / Transfer	2.0	
Acidification (R-4)	Cool <25°C	2.0	Σ = 7.5
	Charge Formic Acid	3.0 [Drum]	
	Mix	0.5	
	Sample/Results	0.5	
	Transfer	1.5	
Centrifugation (R-5)	Centrifuge 2 Batches	8.3	Σ = 8.3
Drying	Charge 1.5 batches	1.5	Σ = 8.0
	Dry Batch	4.0	
	Packout	2.5	

Rate Limiting Time 12.7 hours

NOTES:

nn.n indicates calculated value,
otherwise value is estimated

Total Batch Time Req'd 48.8 hours

36 1.1 hr

Rhone-Poulenc RPA 90946 (Cyclanilide)-DeGussa-Huls Technology Basis
Heat & Mass Balance

Summary of Results	
Final Product lb/bx:	6.4 lb-mol
Limiting Cycle Time:	12.7 hours
Final Product lb/day:	12.2 lb-mol/day

Assumptions:

1. Process overall 80% O.S.T.
2. 0.5% Material Loss through centrifugation
3. Centrifuge discharge @ 20% LOD
4. Centrifugation Cycle=45 minutes @ 400 lb./plow
5. Dryer discharge at 0.5% LOD
6. All Yield calculations based on DCA
7. ---
8. ---
9. ---
10. ---

Handwritten notes:
 2/3
 2/2
 40.4
 9.5/46
 48/46

Stream No.		1	2	3	4	5	6	7	8	9	10	11
Description		Premix Initial Charge	Coupling Rxtr Charge + Premix	MeOH-Tol Azeo Strip	O/H Charged Back	Intermed Xferred to Hydrol Rxtr	Hydrol Rxtr Water Charge	Hydrol Intermediate	MeOH Distillat'n	AQ Phase to Acidific'n	ORG Phase to Rec'y	Acidific'n Rxtr Acid Charge
Component	MW											
Raw Materials												
CPDM	158.10		9.482									
2,4 DCA	162.00	9.254	9.254									
NaOCH3	54.00		10.494									
MeOH	32.00		41.320									
H2O	18.00						416.429	416.429		416.429		
NaOH	40.00							3.798				
H2SO4	98.00											7.649
Toluene	92.15	24.403	83.376	8.207	8.207	83.376		83.376	9.456		73.920	
(By) Products												
Na-CPMPA	310.10					9.482						
MeOH	32.00			62.308	62.308	62.308		71.790	71.790			
Na-RPA 90946	296.10							9.482		9.482		
RPA 90946	274.10											
Na2SO4	142.00											
Others	300.00										1.099	
Stream Weight, lb/batch		33.7	153.9	70.5	70.5	155.2	416.4	584.9	81.2	425.9	75.0	7.6
Stream Volume, gal {ft3}												
Temperature, °F		100.00	136.00	146.30	145.00	145.00	140.00	77.00	212.00	68.00	77.00	77.00
Pressure, psia {torr}		14.70	14.70	270.00	14.70	14.70	14.70	14.70	14.70	14.70	14.70	14.70
Density, g/cc {lb/ft3}		0.87	0.95	0.81	0.81	0.86	1.00	0.97	0.81	0.97	0.87	1.18
Viscosity, cP (CSt)												
Molar Yield {Overall}												

Rhone Poulenc RPA 90946 (C)
 Heat & Mass Balance

Assumptions:

1. Process overall 80% O.S.T.
2. 0.5% Material Loss through centrifugation
3. Centrifuge discharge @ 20% LOD
4. Centrifugation Cycle=45 minutes @ 400 lb./p
5. Dryer discharge at 0.5% LOD

Stream No.		12	13	14	15	16	17	XX	XX		
Description		Precipit'd Prod't to Centrif.	Wash + ML Disch.	Wet Prod't to Dryer	Dried Final Product	Toluene to Recycle	Recycled Toluene	Organic Waste	Aqueous Waste		
Component	MW										
Raw Materials											
CPDM	158.10									#REF!	#REF!
2,4 DCA	162.00									#REF!	#REF!
NaOCH3	54.00									#REF!	#REF!
MeOH	32.00									#REF!	#REF!
H2O	18.00	416.429	432.209	36.820	0.611	0.605		0.605	81.557	#REF!	#REF!
NaOH	40.00									#REF!	#REF!
H2SO4	98.00									#REF!	#REF!
Toluene	92.15					73.920	58.556	15.363		#REF!	#REF!
By) Products											
Na-CPMPA	310.10									#REF!	#REF!
MeOH	32.00							71.790		#REF!	#REF!
Na-RPA 90946	296.10									#REF!	#REF!
RPA 90946	274.10	8.060		8.020	6.416					#REF!	#REF!
Na2SO4	142.00	7.799	7.799						7.799	#REF!	#REF!
Others	300.00					1.099		1.099		#REF!	#REF!
Stream Weight, lb/batch		432.3	440.0	44.8	7.0	75.6	58.6	88.9	89.4		
Stream Volume, gal (ft3)											
Temperature, °F		68.00	68.00	212.00	212.00	68.00	75.00	68.00	68.00	#REF!	#REF!
Pressure, psia (torr)		14.70	14.70	14.70	37.50	14.70	14.70	14.70	14.70	#REF!	#REF!
Density, g/cc (lb/ft3)		0.97	1.08			0.87	0.87	0.82	1.15	#REF!	#REF!
Viscosity, cP (cSt)										#REF!	#REF!
Molar Yield (Overall)										#REF!	#REF!

Rhone-Poulenc RPA 90946 (Cyclanilide)--DeGussa-Huls Technology
Heat & Mass Balance

Summary of Results	
Final Product lb/bx:	1,759 lb
Limiting Cycle Time:	12.7 hours
Final Product lb/day:	3,331 lb/day
Final Product MT/day:	1.5 MT/day
Prod'n w/two Trains:	2.6 MT/day

Assumptions:

- | | |
|---|--|
| 1. Process overall 80% O.S.T. | 6. All Yield calculations based on DCA |
| 2. 0.5% Matenal Loss through centrifugation | 7. --- |
| 3. Centrfuge discharge @ 20% LOD | 8. --- |
| 4. Centrifugation Cycle=45 minutes @ 400 lb./plow | 9. --- |
| 5. Dryer discharge at 0.5% LOD | 10. --- |

Stream No.		1	2	3	4	5	6	7	8	9	10	11
Description		Premix Initial Charge	Coupling Rxtr Charge + Premix	MeOH-Tol Azeo Strip	O/H Charged Back	Intermed Xferred to Hydrol Rxtr	Hydrol Rxtr Water Charge	Hydrol Intermediate	MeOH Distillat'n	AQ Phase to Acidific'n	ORG Phase to Rec'y	Acidific'n Rxtr Acid Charge
Component	MW											
Raw Materials												
CPDM	158.10		1,499.1									
2,4 DCA	162.00	1,499.1	1,499.1									
NaOCH3	54.00		566.7									
MeOH	32.00		1,322.2									
H2O	18.00						7,495.7	7,495.7		7,495.7		
NaOH	40.00							151.9				
Formic Acid	46.03											749.6
Toluene	92.15	2,248.7	7,683.1	756.3	756.3	7,683.1		7,683.1	871.4		6,811.7	
(By) Products												
Na-CPMPA	310.10					2,940.4						
MeOH	32.00			1,993.9	1,993.9	1,993.9		2,297.3	2,297.3			
Na-RPA 90946	296.10							2,807.7		2,807.7		
RPA 90946	274.10											
NaCHO2	68.01											
Others	---										329.7	
Stream Weight, lb/batch		3,747.9	12,570.3	2,750.2	2,750.2	12,617.4	7,495.7	20,435.7	3,168.7	10,303.4	7,141.5	749.6
Stream Volume, gal {ft3}		519.0	1,596.9	406.5	406.5	1,755.8	899.8	2,529.1	468.4	1,275.2	986.6	76.3
Temperature, °F		100.0	136.0	146.3	145.0	145.0	140.0	77.0	212.0	68.0	77.0	77.0
Pressure, psia {torr}		14.7	14.7	{270}	14.7	14.7	14.7	14.7	14.7	14.7	14.7	14.7
Density, g/cc {lb/ft3}		0.87	0.95	0.81	0.81	0.86	1.00	0.97	0.81	0.97	0.87	1.18
Viscosity, cP {cSt}												
Molar Yield {Overall}												

**Rhone Poulenc RPA 90946 (Cycl.
Heat & Mass Balance**

Assumptions:

1. Process overall 80% O.S.T.
2. 0.5% Material Loss through centrifugation
3. Centrifuge discharge @ 20% LOD
4. Centrifugation Cycle=45 minutes @ 400 lb./p
5. Dryer discharge at 0.5% LOD

Stream No.	Description	CF		Dryer		Packout	Solvent Recovery		Water Recovery		Waste Streams	
		12	13	14	15	16	17	18	19	20	21	
		Precipit'd Prod't to Centrif.	Wash + ML Disch.	Wet Prod't to Dryer	Dried Final Product	Toluene to Recycle	Recycled Toluene	Water to Recycle	Recycled Water	Organic Waste	Aqueous Waste	
Component	MW											
Raw Materials												
CPDM	158.10											
2,4 DCA	162.00											
NaOCH3	54.00											
MeOH	32.00											
H2O	18.00	7,495.7	7,779.8	662.8	11.0	10.9		8,442.5	6,974.5	10.9	1,468.0	
NaOH	40.00											
Formic Acid	46.03											
Toluene	92.15					6,811.7	5,396.0			1,415.7		
(By) Products												
Na-CPMPA	310.10											
MeOH	32.00									2,297.3		
Na-RPA 90946	296.10											
RPA 90946	274.10	2,209.2		2,198.2	1,758.5							
NaCHO2	68.01	1,107.5	1,107.5					1,107.5			1,107.5	
Others	--					329.7				329.7		
Stream Weight, lb/batch		10,812.4	8,887.2	2,860.9	1,769.5	7,152.3	5,396.0	9,550.0	6,974.5	4,053.7	2,575.5	
Stream Volume, gal (ft3)		1,338.2	987.9			990.7	747.4	1,061.5	837.3	592.9	268.9	
Temperature, °F		68.0	68.0	212.0	212.0	68.0	75.0	68.0	68.0	68.0	68.0	
Pressure, psia (torr)		14.7	14.7	14.7	{38}	14.7	14.7	14.7	14.7	14.7	14.7	
Density, g/cc (lb/ft3)		0.97	1.08			0.87	0.87	1.08	1.00	0.82	1.15	
Viscosity, cP (cSt)												
Molar Yield (Overall)		85%										

Rhone Poulenc RPA 90946 (Cyclanilide)—DeGussa-Huls Technology Basis
 Cycle Time Analysis

		Step Cycle Time	Vessel Cycle Time
Premix Prep (R-1)	Charge Toluene	0.2 [Bulk]	Σ = 1.5
	Charge 2,4 DCA	0.8 [Drum]	
	Mix/Hold	0.5	
Coupling Reaction (R-2)	Charge Toluene	0.5 [Bulk]	Σ = 10.8
	Charge Premix	0.3	
	Draw Vacuum	0.5	
	Heat to 56-59°C	0.8	
	Charge Na Methoxide	3.0 [Tote]	
	Distill MeOH/Toluene Azeotrope	3.0	
	Cool to 60-65°C	2.0	
	Transfer O/H Back	0.3	
	Transfer to Hydrolysis Rxtr	1.0	
Hydrolysis Reaction (R-3)	Charge Tempered Water	1.2 [Pipeline]	Σ = 12.7
	Heat/Reflux	2.5 3.0	
	Distill MeOH	2.5	
	Cool Rxtr <50°C	2.0	
	Sample/NaOH Adjust	2.5	
	Phase Separate / Transfer	2.0	
Acidification (R-4)	Cool <25°C	2.0	Σ = 7.5
	Charge Formic Acid	3.0 [Drum]	
	Mix	0.5	
	Sample/Results	0.5	
	Transfer	1.5	
Centrifugation (R-5)	Centrifuge 2 Batches	8.3	Σ = 8.3
Drying	Charge 1 5 batches	1.5	Σ = 8.0
	Dry Batch	4.0	
	Packout	2.5	

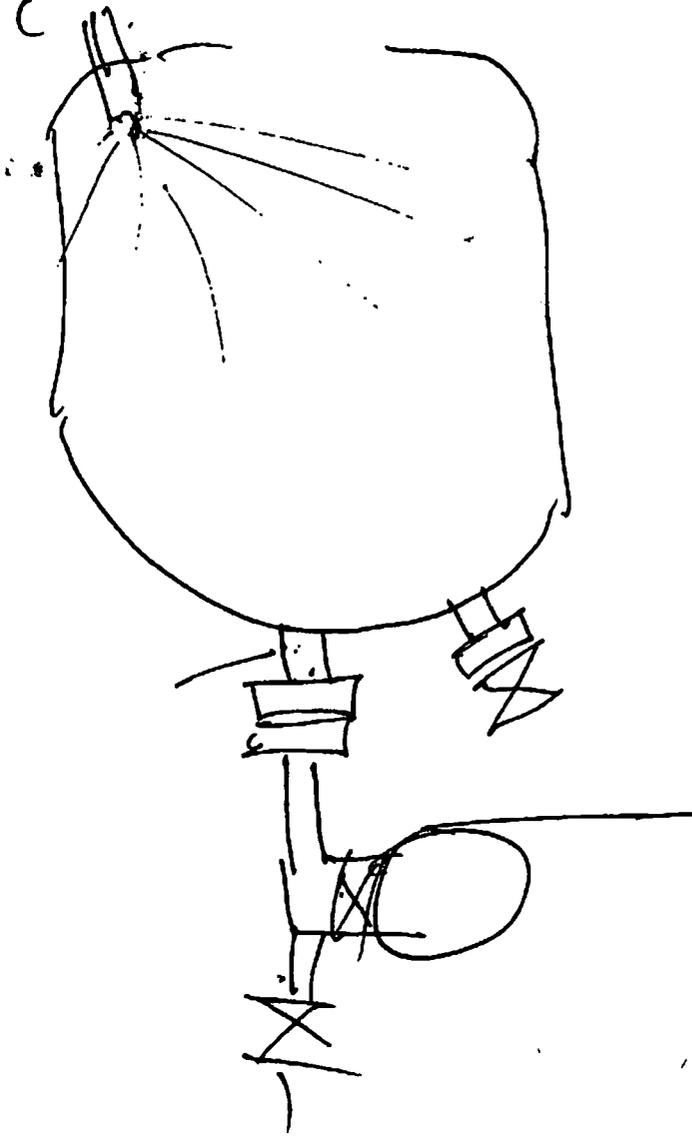
Rate Limiting Time 12.7 hours

NOTES:

nn.n indicates calculated value,
 otherwise value is estimated

Total Batch 48.8 hours
 Time Req'd

McChato C



2. Analysis methods?
3. Analytical targets?
4. Acceptable materials of construction (Glass lined steel? 316 Stainless Steel?—
Especially in regards to distillation column, column packing, pumps, heat exchangers)

D. Hydrolysis Intermediate

1. Physical Properties
 - a. Viscosity curve temperature curve (if different from water)
 - b. Vapor Pressure vs. temperature curve (if different from water)
 - c. Density vs. temperature curve
2. Analysis methods?
3. Analytical targets?
4. Acceptable materials of construction (Glass lined steel? 316 Stainless Steel?—
Especially in regards to distillation column, column packing, pumps, heat exchangers)

E. Acidification Intermediate

1. Physical Properties
 - a. Viscosity vs. temperature curve
 - b. Vapor Pressure vs. temperature curve
 - c. Density vs. temperature curve
2. Analysis methods?
3. Analytical targets?
4. Particle size distribution data?
5. Acceptable materials of construction (Glass lined steel? 316 Stainless Steel?—
Especially in regards to distillation column, column packing, pumps, heat exchangers,
and centrifuge [Hast C])

F. Centrifuge Wet Cake

1. Bulk density of the wet solids at 10, 25, and 50 %Volatile.
2. Typical %Volatile of centrifuged solids?
3. Specific heat of centrifuged solids?
4. Particle size distribution?

G. Dried Final Product

1. Bulk density of dry solids?
2. Melting point curve solids—does the M.P. change as the %Volatiles changes?
3. Specific heat of dry solids?

H. MeOH/Toluene Azeotrope

1. Is azeotrope broken (ternary azeotrope) in toluene recovery to maximize toluene recovery?
2. If so, what solvent is used to break azeotrope?
3. Is toluene water washed to remove MeOH and maximize %toluene recovered?
4. Is the toluene dried in some manner? (i.e. molecular sieve)
5. Specification for Recovered toluene?
6. Analysis and targets required for toluene re-use?

I. Organic Waste

1. What is the typical composition of the Organic Waste stream leaving the process after recovery (Degussa package: toluene 33%, high boilers 67%)
2. What is typical amount of organic waste for Sulfuric Acid process (Degussa package: 0.279 kg bottoms / 1 kg bone dry product)?

J. Aqueous Waste

1. What is the typical composition of the Aqueous Waste stream leaving the process after recovery for Sulfuric Acid process (Degussa package 85% NaOCHO, 15% H₂O)?
2. What is typical amount of aqueous waste for Sulfuric Acid process (Degussa package: 0.540 kg bottoms / 1 kg bone dry product)?
3. In what phase is Aqueous Waste handled (i.e. liquid, solid, slurry)? Sodium Formate solubility in water 43%.
4. In the "In-Process Control" section of the Degussa package, item 3 states that "2,4 DCA concentration in the outflow of the activated carbon filter <30 ppm." What is the concentration of 2,4 DCA in the supply stream to this filter?
5. Is a distillation column required in the water recovery step or could a simple strip (flash distillation—2 total stages or a simple spray column contactor—3 total stages) accomplish the desired separation?

II. Process Steps

A. Coupling

1. Can mixed Xylenes be used instead of Toluene for solvent—No azeotrope? Cedar lab work shows Xylene used with Dugussa process is promising. Xylene does not appear to work with R.P. process due to higher temperatures required for strip.
2. Can additional toluene be added to coupling batch following distillation for viscosity control? Cedar lab work shows addition of neat solvent to batch does little to "clean" reactor walls. Addition of the MeOH/toluene overheads BACK to the reactor causes the material to go from slurry to dark-amber solution—easier to transfer, less problems with leftover material in the reactor for next batch.
3. Distillation done under vacuum or at atmospheric pressure conditions? If done under atmospheric conditions, separation can potentially be made in a smaller column.
4. If done under vacuum: is vacuum controlled and at what pressure?

B. Hydrolysis

1. Does the phase split generate a rag layer? Cedar lab work shows rag layer for toluene—no rag for Xylene.
2. If rag layer is generated, does it go with aqueous or organic phases?
3. What is impact of Methanol left in the reactor?

C. Acidification

1. What acid (Sulfuric or Formic) is to be used for the process? Cedar lab work shows Formic processes better.
2. Cedar lab work also shows propionic acid works for acidification step.
3. What is maximum pH for step?
4. After precipitation, can the pH be adjusted back to 4 to 5?

K. Centrifugation

1. Material of construction of the centrifuge filter cloth?
2. Mesh or Micron rating of the centrifuge cloth?
3. Is the mesh size an absolute or a qualitative rating?

L. Drying

1. Cedar lab work shows low temperature and no vacuum required for drying. What is Degussa experience?
2. Dust explosion classification? (ST- rating)

M. Pack-out

1. Material packed out in polypropylene lined drums (RP Merit Note). Are these polypropylene lined steel, fiber, or plastic drums?
2. What is the required net weight of the package?
3. What is the tolerance required on the weight of the package?

N. Toluene Recovery

1. Operating Conditions?
 - a. Total number of stages?
 - b. Overall column height?
 - c. Column diameter?
 - d. Material of construction?
 - e. Type internals?
 - f. Boilup rate? ΔP at rate?
 - g. Reflux ratio?
 - h. Take-off rate?
 - i. Column top temperature?
 - j. Reboiler temperature?

O. Water Recovery (Salt Concentration)

- a. Total number of stages?
- b. Overall column height?
- c. Column diameter?
- d. Material of construction?
- e. Type internals?
- f. Boilup rate? ΔP at rate?
- g. Reflux ratio?
- h. Take-off rate?
- i. Column top temperature?
- j. Reboiler temperature?

III. Effects of Variables

For each process step, delineate key process variables and describe the impact of deviation-high and deviation-low. For example

COUPLING

Variable	Target	Effect of Deviation HIGH	Effect of Deviation LOW
Toluene Charge	5.20 kg/kg 2,4 DCA	Increased Toluene Recovery Loading	Thick batch—processing problems
DCA Charge	Etc.	Etc.	Etc.
Final Strip Temperature	Etc.	Etc.	Etc.

Rhône-Poulenc Agro

Copy to: D. Guffey
Jim Aone

Then File

CEDAR Chemical Corporation
Mr Geoffrey L. PRATT
5100 Poplar Ave.
Suite 2414
Memphis, TN 38137
UNITED STATES

25 November 1999

Réf : fb/SR 191.99

SUBJECT : PROCESS TO PREPARE CYCLANILIDE

Dear Geoffrey,

Following the signature of the secrecy agreement which covers the technical information transmitted by Degussa-Hüls, you will find herewith their technical package describing the process to prepare Cyclanilide (their ref : Degussa-Hüls AG/FC-SI-ME/99-09-08 and the reply to RPA 30/09/99).

Please note that the process will be confirmed by Pierre Le Roy in our meeting in December in the U.S. As we have already discussed there are at least two main points of this package in contradiction with the merit note of RPA :

- replacement of sulfure acid by formic acid
- inversion of the reactant addition

That could significantly affects the overall yield of the reactions.

Best regards.


Serge RAVET
Toll manufacturing manager

Reply to the letter from Rhone-Poulenc-Agrevo dated 30.09.99

- **Safety:** No differential thermo analyses (DTAs) of the individual pure substances were carried out.

2,4-DCA melts at 59-62°C without any degradation or evolution of heat. Our experience regarding the storage of molten 2,4-DCA from the Tolochimie company shows that, at least in the first consignment, the proportion of chloride was around 80 mg/kg. This led to corrosion of the high-grade steel tank. However, this elevated chloride content was, at least to a great extent, already present in the raw material delivered.

In its pure form, **CDM** undergoes perceptible degradation at 120°C and higher, forming a high-viscosity polymer. No evolution of heat was observable.

CSDCA melts without degradation at 190-193°C.

- **Stainless steel** = DIN EN 10088: 1.4571 = AISI 316 TI

Glass line = Pfaudler WWG

- **A mass balance** is described in item "3.3 Recipe"
The term "products" is possibly incomprehensible and should be replaced by "effluents".

Additional information regarding "3.2 Processing steps, process description"

Step 1 in R 1: duration 1h

Step 2 in R 2: duration 8h

Step 3 in R 3: duration 8h

Step 4 in R 4: duration 2.5h

Step 5 in R 5 and centrifuge: 8h

Step 6 in drier: 8h

Step 7 in R 6: 5h

Step 8 in R 7: 8h (This reactor perhaps has to be fitted with an additional evaporator.)

**Process for preparing
1-(2,4-dichloroanilincarbonyl)
cyclopropanecarboxylic acid**

(cyclanilide)

**Degussa-Hüls AG
Werk Lülsdorf
Feldmühlestraße
D-53859 Niederkassel**

Contents

Abbreviations

Administrative information

Chapter I: Raw materials

- 1.1 Physical data
- 1.2 Specifications
- 1.3 Impurities
- 1.4 Suppliers

Chapter II: Apparatus

- 2.1 Technical equipment
- 2.2 Flow sheet
- 2.3 Safety

Chapter III: Procedures

- 3.1 Chemical basis
- 3.2 Processing steps, process description
- 3.3 Recipe

Chapter IV: Products

- 4.1 Physical data
- 4.2 Specifications
- 4.3 Impurities
- 4.4 Analytical methods

Chapter V: Patents

- Patent

Abbreviations

Cyclanilide / CS-DCA	1-(2,4-dichloroanilincarbonyl) cyclopropane-carboxylic acid
R	reactor
T	tank
NM	sodium methoxide
CDM	dimethyl cyclopropane-1,1-dicarboxylate
RM	reaction mixture

Administrative information

Degussa-Hüls AG
Weißfrauenstr. 9
D-60287 Frankfurt

Degussa-Hüls AG
Werk Lülsdorf
Feldmühlestraße 1
D-53859 Niederkassel

Sodium methoxide 30%	Appearance: Total alkali: NaOMe eff.:	colourless liquid 29.5 – 31.0% 29.0 – 30.5%
Toluene	Appearance: Content: Water	colourless clear liquid ≥ 99.8% ≤ 200 ppm
NaOH 20 %	Appearance: Content:	clear colourless slightly viscous liquid 19.5 – 20.5%
Water	Appearance: Hardness: pH: COD: AOX:	clear colourless liquid < 1 6 – 7.5 < 30 ppm < 20 ppm
Formic acid	Appearance: Content: Colour index:	clear colourless liquid 84 – 86% < 10

Degussa-Hüls

1.4 Suppliers

Raw materials are identified by the supplier's documents. In the case of external suppliers, certificates of analysis of each batch are requested. Furthermore, each delivery is subjected to a raw material testing. In the case of internal suppliers, an analysis of the batch is requested. This analysis is carried out in the quality control laboratory.

Chapter II: Apparatus

2.1 Technical equipment

0.7 m³ Stainless-steel reactor

R 1

Heating:
Stirrer:
Solids metering funnel

6 bar steam
anchor stirrer

2.0 m³ Stainless-steel reactor

R 2

Heating:
Stirrer:
Column:

6 bar steam
MIG stirrer
mounted on the reactor, approximately 20
theoretical plates

4.0 m³ Stainless-steel reactor

R 3

Heating/cooling:
Stirrer:
Column:

6 bar steam/water
MIG stirrer
mounted on the reactor, approximately 20
theoretical plates

5.0 m³ glass-lined reactor

R 4

Heating/cooling:
Stirrer:
pH measurement:

6 bar steam/water
blade stirrer
probe in the submerged tube of the reactor

1.3 m³ glass-lined reactor

R 5

Stirrer:

impeller stirrer

Heine centrifuge

Type:
Volume:
Speed:

vertical perforated basket centrifuge
160 l
0 – 1000 rpm

1.6 m³ centr. receiver	T 3
pH measurement:	probe in the circulation line
1 m³ shuffle drier	
Heating/cooling:	6 bar steam/water
Stirrer:	blade stirrer
0.7 m³ Stainless-steel reactor	R 6
Heating/cooling:	6 bar steam/water
Stirrer:	MIG stirrer
Column:	mounted on the reactor, approximately 10 theoretical plates, removal of water by phase separation
0.7 m³ Stainless-steel reactor	R 7
Heating/cooling:	6 bar steam/water
Stirrer:	anchor stirrer
Column:	mounted on the reactor, approximately 10 theoretical plates
4 m³ Stainless-steel reactor	T 8
Stirrer:	anchor stirrer
pH measurement:	probe in the circulation line of the reactor
4 m³ Stainless-steel tank	T 4
4 m³ Stainless-steel tank	T 2
4 m³ Stainless-steel tank	T 6
15 m³ Stainless-steel tank	T 1
15 m³ Stainless-steel tank	T 7

Heating:	electric
15 m³ Stainless-steel tank	T 5
Activated charcoal filter	one-layer pressure filter
Volume:	800 l
Pressure:	6 bar maximum
Sieve	separator (gyratory riddle)
Mesh size	0.5 mm

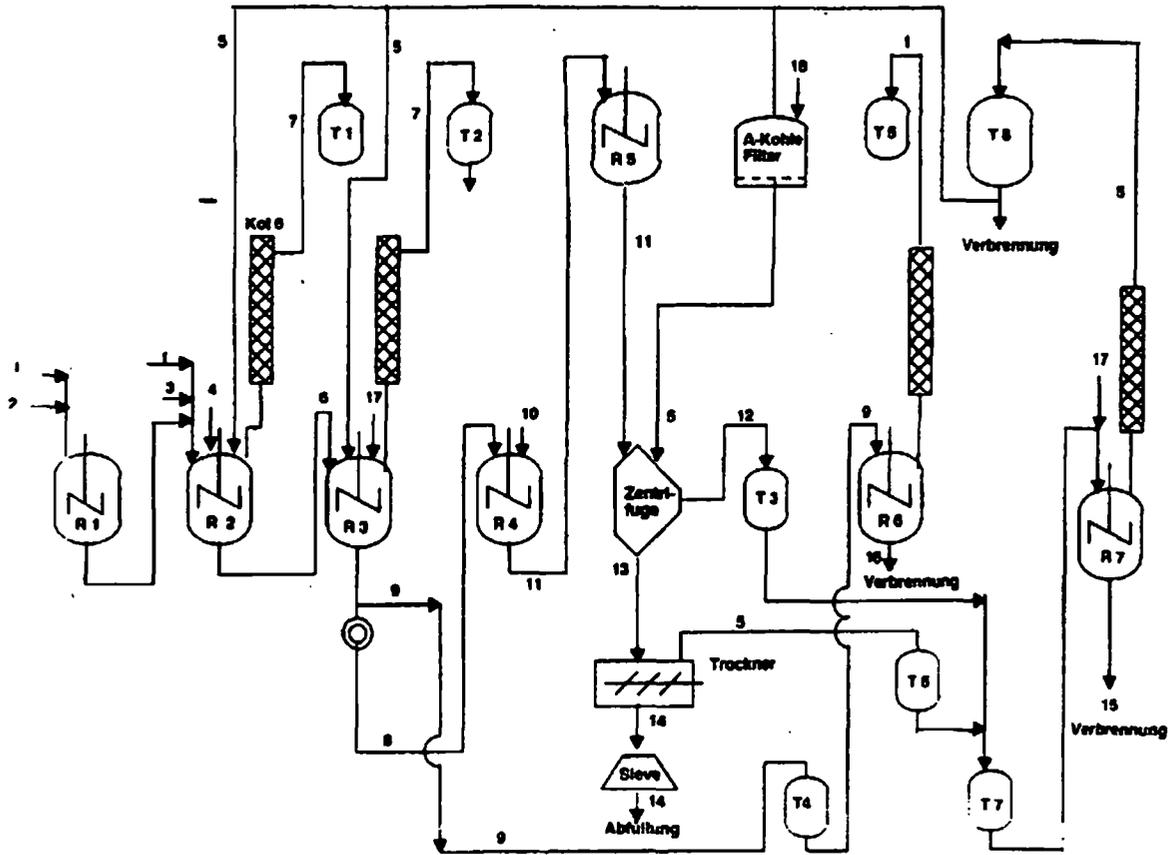
Description of the plant

The plant used for producing cyclanilide is located at the Lülisdorf site, Feldmühlestraße, D-53859 Niederkassel. The organizational code of the Lülisdorf pilot plant is: GB FC WL P 3.

The Lülisdorf pilot plant is designed and suitable for process development and the production of, inter alia, intermediates for agrochemicals. The raw materials required for producing cyclanilide may be used in the Lülisdorf pilot plant, since the appropriate official authorization has been granted.

The Lülisdorf pilot plant is equipped with 0.7 – 5 m³ V4A and glass-lined reactors, with stainless-steel columns, with centrifuges and 1 m³ driers for carrying out the operations.

2.2 Flow sheet



Degussa-Hüls

1 Toluol
2 2,4-DCA
3 CDM
4 NM

5 H₂O
6 Reaktionsgemisch
7 MeOH/Toluol
8 Na-CS-DCA:H₂O

9 Toluol HS
10 Ameisensäure
11 CSDCA/H₂O/NaOCHO
12 H₂O/NaOCHO

13 CSDCA feucht
14 CSDCA
15 NaOCHO

16 HS
17 20% NaOH
18 A-Kohle

T = Tank
R = Reaktor

1 Toluene	5 H ₂ O	9 Toluene:residue	13 cyclanilide moist	16 HB	T = Tank
2 2,4-DCA	6 Reaction mixture	10 Formic acid	14 cyclanilide	17 20% NaOH	R = Reaktor
3 CDM	7 MeOH:toluene	11 cyclanilide:H ₂ O/NaOCHO	15 NaOCHO	18 Activated carbon	
4 NM	8 Na-cyclanilide:H ₂ O	12 H ₂ O NaOCHO			

2.3 Safety:

During the metered addition of NM, the reaction mixture in R 2 passes through a phase of high viscosity. Towards the end of the reaction, the viscosity decreases again.

2.4-Dichloroaniline: Toxic, environmentally hazardous (German Regulation on Hazardous Substances)

Extreme care with respect to work safety is required when working with 2,4-DCA, since the material is classified as being toxic and environmentally hazardous. Efficient exhausting devices are required. Before leaving the plant, all process water has to be examined for 2,4-DCA.

Sodium methoxide 30%: Toxic, corrosive (German Regulation on Hazardous Substances)

Sodium methoxide solution must not come into contact with water, since the sodium hydroxide formed cleaves CDM.

Toluene: Highly flammable (German Regulation on Hazardous Substances)

See specifications for water in Chapter 1

NaOH 20% Corrosive (German Regulation on Hazardous Substances)

Formic acid Corrosive (German Regulation on Hazardous Substances)

The handling of formic acid requires considerable care. Contact between the skin and formic acid results, within a very short period of time, in severe cauterization which heals only very slowly.

Chapter III: Procedures

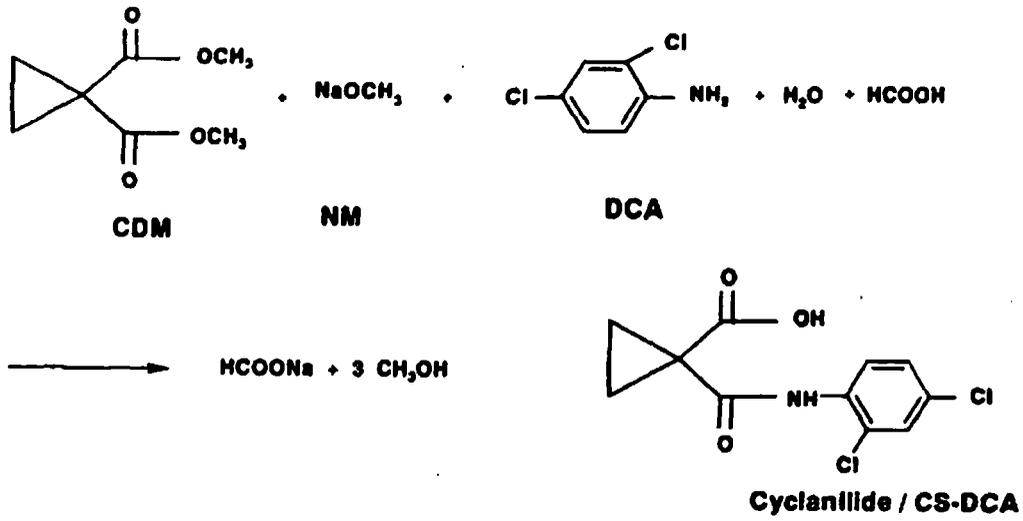
3.1 Chemical basis

Cyclanilide

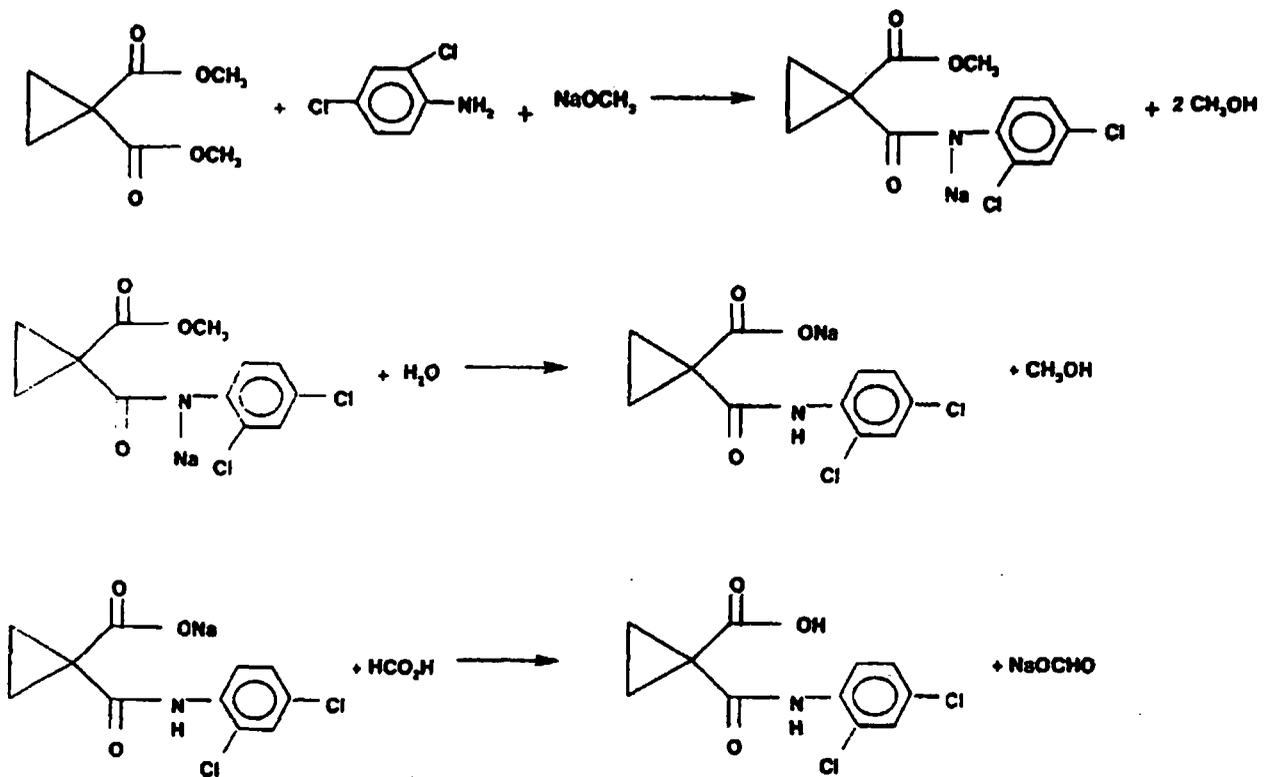
Chemical formula:	$C_{11}H_9Cl_2NO_3$
Molecular weight:	274.1 g/mol
Chemical name:	1-(2,4-dichloroanilinocarbonyl)cyclopropane-1-carboxylic acid
Alternative chemical name:	1-[[[2,4-dichlorophenyl)amino]carbonyl]cyclopropane-carboxylic acid
CAS number:	113136-77-9

After addition of stoichiometric amounts of NM, CDM reacts on one carboxyl group with 2,4-dichloroaniline to give the amide. The other ester group is, after addition of water, hydrolysed and the target product is precipitated out using formic acid, filtered and dried.

Overall equation:



Single steps:



3.2 Processing steps, process description

Step 1 in R 1:

Material	Amount
Toluene	300 kg
2,4-Dichloroaniline	200 kg

R 1 is charged with 300 kg of toluene. 200 kg of 2,4-DCA are then added into R 1. The mixture is stirred at 35-40°C for 20-30 min. The solution is then ready for use.

Step 2 in R 2:

Material	Amount
Toluene/ 2,4-DCA from R 1	500 kg
Toluene	700 - 750 kg
CDM (100%)	200 kg
NM 30	252 kg
Water	500 - 550 kg

R 2 is charged with the toluene/DCA solution, the toluene and the CDM. The pressure is then reduced to 350-360 hPa and the bottom is heated to 56-59°C. The NM 30 is then metered in at a steady rate over 2-2.5 h. During the metered addition of NM, an MeOH/toluene azeotrope is taken off at the top of the column. After the end of the metered addition of NM, distillation is continued until the bottom temperature has reached 76°C. The bottom is then cooled to 60-65°C. Water is added to R 2. The mixture is stirred for 15-20 min. The batch is subsequently transferred to R 3.

Step 3 in R 3:

Material	Amount
RM from R 2	about 1750 kg
Water	450 - 500 kg

R 3 is filled with the reaction mixture from R 2.

The water is charged into R 3.

R 3 is heated at reflux under atmospheric pressure for 3 h.

When the temperature at the top falls below 70°C, the low boilers are distilled off at the top.

During this operation, the temperature at the top is kept below 70°C.

The RM is then cooled to < 50°C.

pH of the lower phase: > 11.5. If this is not the case, the pH is adjusted using a little NaOH and the hydrolysis is repeated.

A phase separation is carried out. The lower phase is transferred to R 4. The upper phase is transferred to R 6.

Step 4 in R 4:

Material	Amount
Lower phase from R 3	about 1300 kg
Formic acid	about 100 kg

The lower phase of the RM from R 3 is transferred to R 4.

R 4 is cooled to < 25°C, and this temperature is maintained during the precipitation.

Formic acid is charged into R 4 over a period of 1-2 h. The pH is adjusted to 3.8-3.9, and cyclanilide precipitates out of the aqueous RM.

Step 5 in R 5 and centrifuge:

Material	Amount
RM from R 4	1400 kg
Water	about 600 kg

The suspension from R 4 is transferred to R 5 and filtered using the centrifuge. The filtercake on the centrifuge is washed with water.

The filtercake is centrifuged and scraped off.

Step 6 in drier:

Material	Amount
Moist filtercake from the centrifuge	about 350 kg

The moist filtercake from the centrifuge is charged into the drier.

The cyclanilide is dried at 90-95°C and < 50 hPa for 4 h.

Step 7 in R 6:

Material	Amount
Upper phase from R 3	about 930 kg

The upper phase from R 3 is charged into R 6 and the toluene is distilled off. The distillate can be recycled into the reaction. The residue is disposed off by incineration.

Step 8 in R 7:

Material	Amount
Filtrate from centrifuge	about 1200 kg
Wash filtrate from the centrifuge	about 650 kg
NaOH 20 %	about 100 kg

Filtrate, wash filtrate from the centrifuge and NaOH 20 % are charged into R 7. Water is distilled off until solid residue remains. This is disposed off by incineration.

In-process control

1. The amount of distillate (azeotrope MeOH/toluene) obtained during the reaction in R 2 has to be > 400 kg.
2. pH of the lower phase after the hydrolysis in R 3: > 11.5
3. 2,4-DCA concentration in the outflow of the activated carbon filter < 30 ppm
4. Melting point of the filtercake on the centrifuge: > 189°C
5. Amount of moist solid on the centrifuge: > 330 kg

3.3 Recipe

	Raw materials	[kmol]	[kg]	[l]
1	Toluene	-	1040	(1200 l)
2	DCA	1.2342	200	
3	CDM (100%)	1.265 (+ 2.5 %)	200	(174 l)
4	NM 30 (75.6 kg 100 %)	1.397 (+ 13.2 %)	252	(260 l)
5	H ₂ O	-	about 1000	(1000)
10	Formic acid (85 %)	1.94	about 105	(about 89 l)
5	Wash H ₂ O (3 centr., in each case 3 x 60-80 ltr.)		about 650	(about 650 l)
17	NaOH (20 %)	0.5	about 100	(about 90 l)
		Sum:	about 3547	
	Products			
16	Toluene bottoms for incineration (from R 6)		about 32	
14	Cyclanilide (86 % yield) (100% yield 338.3 kg)	1.06	290	
1	Toluene distillate		about 920	
7	Azeotrope toluene/MeOH		about 440	
5	H ₂ O distillate		about 1710	
15	Na formate (from R 7)		about 155	
		Sum:	about 3547	

Naturally, the batch sizes laid down in this description are adapted to the equipment in the plant. Batch sizes can be modified as long as the ratios are maintained. Which amounts can be varied and to what extent is described under the individual processing steps. These data are based on experience gained in the plant. There are no experiences or research results on more substantial changes. Accordingly, it cannot be guaranteed that such changes would be successful.

Environmental statement:

All steps carried out in the Lützdorf pilot plant in connection with the process for preparing cyclanilide are in accordance with current legislation.

Chapter V: Patents

Patent:

DE 4114733

**„Verfahren zur Herstellung von substituierten
Malonesteraniliden und Malonsäure-monoaniliden“**

EP 0512211

**„Verfahren zur Herstellung von substituierten
Malonesteraniliden und Malonsäure-monoaniliden“**

US 5334747

**„Method of preparing substituted malonic-acid-anilides and
malonic-acid-monoanilides“**

Degussa-Hüls

CEDAR - WEST HELENA
 Raw materials used - Finish goods used - Packaged - Mfg -
 Shipments - Receipts
 11/30/1988

CC C McGee
 B Christian
 P Fields
 Jim Rone
 File Copy

Item No	Std Factor	Usage Factor	Raw Materials Used	Finish Goods			Mfg'd	Dr	Cr
				Used	Pkg'd				
DCA	3020						1,485,841		
DJCB	41000	1 1300	1 0316	1,532,741				S 701 1420 1,515,557 82	C 153 6740 (1,515,557 82)
Nitric Acid	41020	4970	0 4758	708,708				C 153 5520 567,114 17	S 703 1460 (567,114 17)
Sulfuric Acid	41010	9550	0 8885	1,320,233				C 153 5640 113,072 96	S 705 1460 (113,072 96)
Plat/Carb Cat	41070	0003	0 0004	608				C 153 5530 52,809 32	S 704 1460 (52,809 32)
Hydrogen	41030	0510	0 0561	83,345				S 711 1460 (52,288 00)	
Soda Ash	41050	0110	0 0010	1,456				C 153 5670 100,014 00	S 708 1460 (100,014 00)
Lime	41060	0305	0 0278	41,300				S 708 1460 (189 26)	
50% Rayon Caustic	45090	0182	0 0195	29,022				S 709 1460 (2,891 00)	
Hydrogen Peroxide	41090	0050	0 0044	6,500				S 782 1460 (2,321 76)	
Methanol	42640							S 780 1460 (1,495 00)	
TEPA		0006	0 0011	1,657				S 735 1460	
Ferrous Sulfate		0001	0 0001	112					
Propanil Tech	3000						1,787,920		
DCA-3rd Party	40100	0 7550						S 702 1420 1,805,799 20	C 154 6740 (1,805,799 20)
DCA-Cedar	3020	0 7550	0 7477		1,338,850			C 154 5630 567,114 17	S 710 1460
P Acid	40200	0 3707	0 3692	660,076				C 154 6840 1,383,587 00	S 701 1420 (1,383,587 00)
P Anthy	40300	0 0150	0 0523	93,540				C 154 5640 158,418 24	S 712 1460 (158,418 24)
Flated Tech	3050						1,012,500		
P Tech	3000	1 000	1 000		1,012,500			C 154 5650 86,056 80	S 714 1460 (86,056 80)
3#	3200						6,251		
P Tech	3000	3 2159	3 1611		19,760			S 804 1420 1,063,125 00	C 155 6740 (1,063,125 00)
Isoph	40500	2 2500	2 3958	14,976				C 155 6810 1,022,625 00	S 702 1420 (1,022,625 00)
MO	40400							S 802 1420 38,193 61	C 161 6740 (38,193 61)
Emul	40600	0 0143						C 161 6810 19,857 60	S 702 1420 (19,857 60)
Aromatic B	40800	1 8120	1 8237	11,400				C 161 5680 8,388 58	S 717 1460 (8,388 58)
Amul	40900	1 2683	1 3198	8,250				C 161 5660 5,716 1460	
Sun Oil	41640	0 4300	0 4399	2,750				C 161 5670 5,718 1460	
Tennaco 500	45320							C 161 5685 1,710 00	S 719 1460 (1,710 00)
Cone Blend								C 161 5675 6,270 00	S 720 1460 (6,270 00)
Stepfac								C 161 5650 440 00	S 789 1460 (440 00)
4#	3300							S 817 1420	C 162 6740
P Tech	3000	4 1500						C 162 6810	S 702 1420
F Tech	3050							C 162 6835	S 804 1420
Isoph	40500	0 7200						C 162 5680	S 717 1460
M O	40400	2 7400						C 162 5660	S 716 1460
Emul	40600	0 8250						C 162 5670	S 718 1460
Iso/Mitak	41080							C 162 5780	S 721 1460
Aromatic B	40800							C 162 5685	S 719 1460
Amul	40900							C 162 5675	S 720 1460
4# X	3300							S 817 1420	C 162 6740
P Tech	3000	4 1270						C 162 6810	S 702 1420
M O	40400	1 7620						C 162 5680	S 716 1460
Isoph	40500	1 6880						C 162 5680	S 717 1460
Emul	40600	0 7820						C 162 5670	S 718 1460
Aromatic B	40800	0 0503						C 162 5685	S 719 1460
Amul	40900	0 3944						C 162 5675	S 720 1460
Sun Oil	41640	0 3041						C 162 5650	S 789 1460
Stara	3400						161,833		
P Tech	3000	4 1270	4 1929		678,550			S 611 1420 1,182,899 23	C 170 6740 (1,182,899 23)
F Tech	3050							C 170 6810 685,335 50	S 702 1420 (685,335 50)
Isophi/Mitak	41080	3 9280	3 9119	633,074				C 170 6835	S 804 1420
Emul	40600	0 9030	0 8879	159,870				C 170 5780 329,198 48	S 721 1460 (329,198 48)
Isoph	40500							C 170 5670 111,909 00	S 718 1460 (111,909 00)
MO	40400							C 170 5680	S 717 1460
								C 170 5650	S 716 1460

Item Description	Item No	Total Qty's									
		R/M's	F/G's								
Propanol Tech	3000		1,710,810								
Flake Tech	3050										
Isoph	40500		14,976								
Emul	40600		159,870								
Armul	40900		8,250								
M O	40400										
Aromatic B	40800		11,400								
Isoph/Mibk	41080		633,074								
Sun Oil	41640		2,750								
Tenneco 500	45320										
# Packaged:	Item No	Mt Drms	Bulk	Full Drms							
# 50L	3190	13 210						S 854 1420		C 167 6740	(42,860 00)
# 55's	3210	55 000						S 806 1420			
# 200L's	3250	52 840			120			S 807 1420	42,960 00		
Propanil 360 210L's	10020	55 480						S 826 1420			
# Bulk	3200		6,341		6,340			C 167 6820	38,737 40	S 802 1420	(38,737 40)
# 20L Used	3220							S 818 1420			
# 200L Used	3250							S 807 1420			
15's	42210							C 1067 5890	2,646 00	S 738 1460	(2,646 00)
15 Mt's	42300		120					S 742 1480			
15 Mt's Black	42350							S 756 1480			
# 20L	3220	5 280						S 819 1420		C 160 6740	
# Bulk	3200							C 160 6820		S 802 1420	
# 20L	42000							C 1060 5890		S 739 1460	
# Packaged:	Item No	Mt Drms	Bulk	Full Drms							
Propanil 4# 20L	3280	5 280						S 812 1420		C 169 6740	(230,091 40)
1# 55's	3310	55 000						S 818 1420			
Propanil 4# 210L	3320	55 480						S 836 1420			
Propanil 4# 200L	3330	52 840						S 839 1420			
Cedar Blue Drum 35 gal	3340	35 000			448			S 814 1420	120,977 50		
4# bulk	3300	15,610		15,610				C 169 6830	109,113 90	S 817 1420	(109,113 90)
15 mt's	42210							C 1069 5890	6,690 00	S 738 1480	
Mt 20L	42000							S 739 1460			
35 mt's Plastic	42230		448					S 793 1480			(6,690 00)
15 mt's	42300							S 742 1480			
15 mt's	42550							S 756 1460			
Stam Packaged:	Item No	Mt Drms	Bulk Used	Full Drms							
Stam 35's	3420	35 000			3,645			S 813 1420	995,085 00	C 172 6740	(995,085 00)
bulk	3400	127,575		127,575				C 172 6825	932,573 25	S 811 1420	(932,573 25)
15 mt's	42220		3,645					C 1072 5890	54,675 00	S 780 1480	(54,675 00)
Duron Prod'n:	Item No	Std	Act	R/M Used							
Duron Standard Grade	3030							S 816 1420		C 157 6740	
Duron B Grade	3040							S 844 1420			
DMA	41150	0 0 1411						C 157 5890		S 711 1400	
DMA	41650	0 2100						C 157 5610		S 744 1480	
Heptane	41660	0 0716						C 157 5850		S 745 1460	
Sulfuric Acid	41520							S 782 1480			
40% Rayon Caustic	45080							S 782 1480			
Stanol Prod'n:	Item No	Std	Act	R/M Used							
Stanol	5350										
Sterol	97100		3 3774	59,856							
H-Propanol	90320		7 3262	129,835							
Catalyst	97110		0 0187	349							
Hydrogen	41030		0 0714	1,265				S 8500 1230	1,518 00	S 706 1460	(1,518 00)
Acetfluorfen Prod'n:	Item No	Std	Act	R/M Used							
Acetfluorfen	5120										
Mixed Nitratng Acid	41700										
Perkone D	41740	0 1200									
Acetic Anhydride	41710	0 7200	0 7449	129,811				C 182 5850	64,052 68	S 808 1460	
Sulfuric Acid	41010	0 2400	0 1578	27,502				S 826 1460			(49,328 18)
Nitric Acid	41020	0 2800	0 2536	44,185				C 182 5630	1,100 08	S 704 1460	(1,100 08)
Ethylene Dichloride	41720							C 182 5540	7,069 80	S 705 1460	(7,069 60)
40% Caustic	41530	1 2000	1 4083	245,408				S 808 1460			
Soda Ash	41050							S 783 1480			(14,724 48)
R218118	90200	3 5400	3 0300	528,000				S 708 1480			

Item No	Std	Act	R/M Used	F/G Prod												
TA Prod'n:																
TA Prod'n	17000															
Nitromethane	42680	7600						S	849	1420	C	183	6740			
Formaldehyde	41540	2 5000						C	183	5580	S	787	1450			
Methanol	42640	2450						C	183	5590	S	764	1450			
Sulfuric Acid	41520	0660						C	183	5850	S	735	1460			
Raney Nickel	42690	0110						C	183	5600	S	788	1460			
Hydrogen	41030	1420						C	183	5570	S	706	1460			
50% Caustic	41530	1000									S	792	1460			
FMC S-Nitro Prod'd:																
Item No	Std	Act	R/M Used	F/G Prod												
5-Nitro	5290															
Step 3	90800															
Step 4	90810															
Step 5	90820															
Calcium Chloride	90830															
Chlorine	90720															
A Sulfate	90710															
G Acid	90700															
50% Caustic	45090										S	8000	1230	S	792	1460
20% Oleum	90770															
Methanol	90790															
Soda Ash	90740															
Toluene	90760															
13% Sulfuric Acid	90750															
Mixed Acid	90730															
CYMP Prod'd:																
Item No	Std	Act	R/M Used	F/G Prod												
CYMP	5110															
DICNCL	90840															
IPA	90850															
50% Caustic	41530										S	9000	1230	S	763	1460
Catalyst	90870															
Hydrogen	41030										C	190	5570	S	706	1460
HCl	90860															
DoverPhos Prod'd:																
Item No	Std	Act	R/M Used	F/G Prod												
DoverPhos	5150															
Therminol	90900															
ITP	90910															
2,4 DCP	90920															
Methanol	90930															
Methanol	42640										S	8900	1230	S	735	1460
Xylene	90940															
PE	90950															
Phenol	90960															
Caustic	90970															
Packaged Plant:																
Item No	Std	Act	R/M's	F/G's	Cases	Gals/Lbs										
Pure Trom 25 Kg Pkg'd	17120				371	20,450										
Tromethamine Bulk Used	17000			21,031			C	183	6740	(77,075 25)	S	843	1420	77,075 25		
Trometamol 25 Kg	17220						C	183	6860	79,286 87	S	849	1420	(79,286 87)		
Trometamol 50 Kg	17240						S	845	1420		C	181	6740			
Tris Ultr Pure 100Kg	17250						C	181	6740		S	847	1420			
Pure Tris-Hol 100Kg	17260						C	181	6740		S	853	1420			
Tromethamine Bulk Used	17000						C	181	6880		S	855	1420			
Wham Packaged:																
Item No	Std	Act	R/M's	F/G's	Cases	Gals/Lbs										
Wham 2x2.5	3180						S	832	1420		C	184	6740			
Wham 10DL	3230						S	828	1420							
Wham 30	3240						S	805	1420							
S Wham 30	3350						S	831	1420							
S Wham 2x2 5's	3360						S	834	1420							
S Wham Bulk	3370						S	858	1420							
1/2 Wham 2x2 5's Used	3360						C	184	6835		S	834	1420			
Isiked Tech	3050	4 1240					C	184	6835		S	804	1420			
Morwet	41460	0 0970					C	184	6850		S	726	1460			
Polyfon O	41470	0 0100									S	727	1460			
Glycerine	41480	0 2430									S	728	1460			
Alfonio	41490	0 3890									S	729	1460			
Ketzan	41510	0 0050									S	761	1460			
Veegum	41570	0 1170									S	731	1460			
Anti foam DC 1500	45140	0 0010									S	785	1460			
Technical Cerbyl	41670	0 0070									S	757	1460			
Elthephon	41680	0 0400									S	791	1460			

Wham Packaged Cont'd:	Item No	Std	Act	R/M's	F/G's	Cases	Gals/Lbs				
Soprophor 4D384	41690	0	1460					S	809	1460	
Proxel	41730							S	825	1460	
Formaldehyde											
Glutaraldehyde	41750							S	827	1460	
Citric Acid	41590							S	767	1460	
30 m's	42100							C	184	5870	
30 m's @ Pachuta	42100							S	752	1460	
25 m's	44200							S	752	1460	
25 m's	44200							S	759	1460	
Duet Packaged:	Item No	Std	Act	R/M's	F/G's	Cases/Drums	Gals/Lbs				
Duet 30	3430							S	823	1420	C 159 6740
Flaked Tech	3050							C	159	6835	S 804 1420
Veegum	41570							C	159	5850	S 731 1460
Glyoenne	41480										S 728 1460
Soprophor	41690										S 809 1460
Marwel	41460										S 728 1460
Polyfon O	41470										S 727 1460
Liethphon	41680										S 791 1460
Proxel	41730										S 825 1460
Formaldehyde											
Antifoam	45140										S 785 1460
Bensulfuron Methyl Tech											
Kelzan	41510										S 761 1460
30 m's	42100							C	159	5870	S 752 1460
30 m's @ Pachuta	42100										S 752 1460
Total Flaked Tech Used	3050										S 752 1460
Flake Tech Packaged:	Item No	Std	Act	R/M's	F/G's	Cases	Gals/Lbs				
Flake Tech 25Kg	3060					1,215	66,947	S	822	1420	85,657 50 C 155 6740 (85,657 50)
Flake Tech Used	3050		1 0003		66,969			C	155	6835	70,317 45 S 804 1420 (70,317 45)
Outside Plant:											
Flake Tech 25Kg	3060							S	822	1420	C 155 6740
Flake Tech Used	3050							C	155	6835	S 804 1420
Duron Col Packaged:	Item No	Std	Act	R/M's	F/G's	Cases	Gals/Lbs				
Duron Col 224 Kg	3070							S	848	1420	C 158 6740
Duron	3030		5820					C	158	6865	S 816 1420
Arquad 16/29	45100		0850					C	158	5850	S 781 1460
Arquad 2C75	45120		0200								S 783 1460
Argalite Blue Dye	45130		0020								S 784 1460
XC 1500 Antifoam	45140		0010								S 785 1460
Duron 55 Gal	45150							C	1058	5890	S 786 1460
Butox 7500 Produced:	Item No	Std	Act	R/M's	F/G's	Cases	Gals/Lbs				
Outside Plant:											
Butoxone DF 7500 Bulk	15590						47,702	S	860	1420	88,248 70 C 420 6740 (88,248 70)
Butoxone DF 7500	15580							S	420	1420	C 420 6740
Butoxone DF 7500 Bulk Used	15580							C	420	6870	S 880 1420
4 D-B Acid	41550		7650	7603	36,268			C	420	5510	72,532 00 S 765 1460 (72,532 00)
Continental Clay	41620		1840	2032	9,691			C	420	5850	4,230 00 S 748 1460 (581 48)
Li Sol 233	41500		0050	- 0369	(1,760)			C			S 737 1460 1,460 80
Stepperse DF 200	41800		0600	0680	3,242			C			S 740 1460 (4,117 34)
Stepwet DF 88	41810		0050	0084	400			C			S 743 1460 (892 00)
Inside Plant:											
Butoxone DF 7500	15580							S	850	1420	C 420 6740
Butoxone DF 7500 Bulk Used	15580							C	420	6870	C 860 1420
Butox 175 Packaged:	Item No	Std	Act	R/M's	F/G's	Cases	Gals/Lbs				
Butoxone 175 4rt	15260							S	410	1420	C 410 6740
Butox 200 Bulk Used	15200		0 8152					C	410	6850	S 430 1420
4, D B Acid	41550		1 8000					C	410	5510	S 765 1460
0% DMA	41580		0 8000					C	410	5700	S 768 1460
Citric Acid	41590		0 2800					C	410	5705	S 767 1460
Uigs	44100							C	410	5870	S 749 1460
Butoxone 175 2x2 5	15240							S	410	1420	C 410 6740
Butox 200 Bulk Used	15200		0 8152					C	410	6850	S 430 1420
4, D B Acid	41550		1 8000					C	410	5510	S 765 1460
0% DMA	41580		0 8000					C	410	5700	S 768 1460
Citric Acid	41590		0 2800					C	410	5705	S 767 1460
Uigs	44200							C	410	5870	S 759 1460
Butoxone 175 55	15270							S	410	1420	C 410 6740
Butox 200 Bulk Used	15200		0 8152					C	410	6850	S 430 1420
4, D B Acid	41550		1 8000					C	410	5510	S 765 1460
0% DMA	41580		0 8000					C	410	5700	S 766 1460

Item No	Std	Act	R/M's	F/G's	Cases	Gals/Lbs					
Butox 175 Pkg'd (cont'd)											
Citric Acid	41590	0 2800						C	410	5705	S 767 1460
Butox 200 Packaged:											
Butoxone 200 4x1	15560							S	430	1420	C 430 6740
Butox 200 Bulk Used	15200	1 0000						C	430	6850	S 824 1420
2 4, D B Acid	41550	2 0800						C	430	5510	S 765 1460
60% DMA	41580	1 1000						C	430	5700	S 766 1460
Citric Acid	41590	0 4200						C	430	5705	S 767 1460
Jugs-1 gal plastic	44100							C	430	5870	S 749 1460
ICC-Cordella Cont'd											
Butox 200 Packaged Cont											
Butoxone 200 2x2 5	15540							S	430	1420	C 430 6740
Butox 200 Bulk Used	15200	1 0000						C	430	6850	S 824 1420
2 4, D B Acid	41550	2 0800						C	430	5510	S 765 1460
60% DMA	41580	1 1000						C	430	5700	S 766 1460
Citric Acid	41590	0 4200						C	430	5705	S 767 1460
Jugs-2 5 gal plastic	44200							C	430	5870	S 759 1460
Butoxone 200 55	15570							S	430	1420	C 430 6740
Butox 200 Bulk Used	15200	1 0000						C	430	6850	S 824 1420
2 4, D B Acid	41550	2 0800						C	430	5510	S 765 1460
60% DMA	41580	1 1000						C	430	5700	S 766 1460
Citric Acid	41590	0 4200						C	430	5705	S 767 1460

Shipped from Plant:

Item No	Location	Containers	lbs/gals
Prop Tech	3000	4	Plant
DCA	3020	4	Plant
Duron	3030	4	Plant
Flake Tech	3050	4	Plant
Flake Tech 25KG	3060	4	Plant
3# 50 L	3190	4	Plant
3# Bulk	3200	4	Plant
3# 55's	3210	4	Plant
3# 20L	3220	4	Plant
3# 200L	3250	4	Plant
4# 20L	3280	4	Plant
4# Bulk	3300	4	Plant
4# 55's	3310	4	Plant
4# 210 L	3320	4	Plant
4# 200 L	3330	4	Plant
4# 35's	3340	4	Plant
Stam Bulk	3400	4	Plant
Stam 35's	3420	4	Plant
Propanil 360 210L	10020	4	Plant
Ethephon 100%	15740	4	Plant
Tromethasme Bulk	17000	4	Plant
Them 25 KG	17020	4	Plant
Tromethasme 25KG	17120	4	Plant
Trometamol 50KG	17240	4	Plant
Tra Ultra Pure 100Kg	17250	4	Plant
Pure Tra-Hol 100Kg	17260	4	Plant
Tra Ultra Pure 25Kg	17770	4	Plant
MO	40400	4	Plant
Isoph	40500	4	Plant
4# Emul	40600	4	Plant
Emul	40900	4	Plant
TA-40 Waste Water		4	Plant

Shipped from O/S Plant:

Item No	Location	Containers	lbs/gals
DCA	3020	97	In Transit
Duron Std	3030	10	B/H
Duron Std	3030	52	Gulf States
Duron Std	3030	97	In Transit
Duron B Grade	3040	4	Pt
Flaked Tech	3050	10	B/H
Flaked Tech	3050	78	Odom-Pachuta
Flaked Tech	3050	86	Odom
Flaked Tech 25Kg	3060	78	Odom-Pachuta
Flaked Tech 25Kg	3060	86	Odom
Duron Col 224 Kg	3070	88	Odom
Wham! EZ 2x2 5 gal	3180	10	B/H
Wham! EZ 2x2 5 gal	3180	88	Odom

Shipped from O/S Plant Cont'd:

	Item No	Location		Containers	lbs/gals
Wham 100 Ltr	3230	88	Odom		
Wham 30gls	3240	10	B/H		
Wham 30gls	3240	59	Rice Farmers		
Wham 30gls	3240	78	Odom-Pachuta		
Wham 30gls	3240	88	Odom		
Wham 30gls	3240	88	Amer Rice		
Wham 5gls	3260	10	B/H		
Wham 5gls	3260	88	Odom		
Wham 5gls	3260	88	Amer Rice		
4# 35	3340	10	B/H	1,500	52,500
4# 35	3340	15	Amer Whse		
4# 35	3340	59	Rice Farmers		
Super Wham 30	3350	10	B/H		
Super Wham 30	3350	15	Amer Whse		
Super Wham 30	3350	59	Rice Farmers		
Super Wham 30	3350	78	Odom-Pachuta		
Super Wham 30	3350	88	Odom		
Super Wham 2x2 5	3360	10	B/H		
Super Wham 2x2 5	3360	88	Odom		
Super wham Bulk	3370	88	Odom		
Stam 35	3420	10	B/H		
Duet 30	3430	10	B/H		
Duet 30	3430	78	Odom-Pachuta		
Duet 30	3430	88	Odom		
Butox 200 Bulk	15200	57	HCC-Cordele		
Butox 175 2x2 5	15240	10	B/H		
Butox 175 2x2 5	15240	20	Gray-Albany		
Butox 175 2x2 5	15240	21	Gray-Ashburn		
Butox 175 2x2 5	15240	30	AWS		
Butox 175 2x2 5	15240	57	HCC-Cordele		
Butox 175 4x1	15260	10	B/H		
Butox 175 4x1	15260	11	Casco		
Butox 175 4x1	15260	20	Gray-Albany		
Butox 175 4x1	15260	21	Gray-Ashburn		
Butox 175 4x1	15260	30	AWS		
Butox 175 4x1	15260	57	HCC-Cordele		
Butox 200 2x2 5	15540	10	B/H		
Butox 200 2x2 5	15540	15	American W/H	576	2,880
Butox 200 2x2 5	15540	20	Gray-Albany		
Butox 200 2x2 5	15540	21	Gray-Ashburn		
Butox 200 2x2 5	15540	30	AWS		
Butox 200 2x2 5	15540	35	Robertson		
Butox 200 2x2 5	15540	57	HCC-Cordele		
Butox 200 4x1	15560	10	B/H		
Butox 200 4x1	15560	11	Casco		
Butox 200 4x1	15560	15	American W/H		
Butox 200 4x1	15560	20	Gray-Albany		
Butox 200 4x1	15560	21	Gray-Ashburn		
Butox 200 4x1	15560	30	AWS		
Butox 200 4x1	15560	35	Robertson		
Butox 200 4x1	15560	57	HCC-Cordele		
Butox 7500 10x2 33	15580	10	B/H		
Butox 7500 10x2 33	15580	15	American W/H	352	8,202
Butox 7500 10x2 33	15580	20	Gray-Albany		
Butox 7500 10x2 33	15580	21	Gray-Ashburn		
Butox 7500 10x2 33	15580	88	Odom		
Butox 7500 10x2 33	15580	30	AWS		
Ethephon	15740	78	Odom-Pachuta		
Tromethamine 25Kg	17120	31	Mertex	420	23,150
Tromethamine 25Kg	17120	16	Antwerp	65	3,583
2,4 DB Acid	41550	97	In Trans		
Mt 30 gal drum	42100	88	Odom-Waynesboro		

Transfers:

	Item No	From		To	Cases/Drums	Gals/Lbs
DCA	3020	4	Pit	97	In Trans	
DCA	3020	4	Pit	100	EMV-Hungary	
DCA	3020	97	In Transit	4	Pit	
NCA	3020	97	In Transit	52	Gulf States	
UCA	3020	97	In Transit	100	EMV Hungary	

Transfers Conf'd:	Item No	From	To	Cases/Drums	Gals/Lbs
CA	3020	100 EMV-Hungary	4 PR		
auron	3030	4 PR	10 B/H		
auron	3030	4 PR	86 Odom		
auron	3030	10 B/H	4 PR		
auron	3030	10 B/H	86 Odom		
auron	3030	78 Odom-Pachuta	4 PR		
auron	3030	86 Odom	78 Odom-Pachuta		
auron	3030	97 In Transit	52 Gulf States		908,097
auron B Grade	3040	4 PR	10 B/H		
auron B Grade	3040	10 B/H	4 PR		
Flake Tech	3050	4 PR	10 B/H		945,000
Flake Tech	3050	4 PR	58 HCC-W/H		
Flake Tech	3050	4 PR	78 Pachuta		
Flake Tech	3050	4 PR	86 Odom		
Flake Tech	3050	10 B/H	4 PR		48,500
Flake Tech	3050	10 B/H	86 Odom		
Flake Tech	3050	10 B/H	58 HCC-W/H		
Flake Tech	3050	10 B/H	78 Pachuta		
Flake Tech	3050	86 Odom	4 PR		
Flake Tech	3050	86 Odom	10 B/H		
Flake Tech	3050	86 Odom	78 Odom-Pachuta		
Flake Tech 25KG	3060	86 Odom	4 PR		
Flake Tech 25KG	3060	86 Odom	78 Odom-Pachuta		
Flake Tech 25KG	3060	4 PR	86 Odom		
Wham 2x2 5	3180	10 B/H	4 PR		
Wham 2x2 5	3180	10 B/H	86 Odom Ind		
Wham 2x2 5	3180	86 Odom Ind	4 PR		
Wham 2x2 5	3180	86 Odom Ind	10 B/H		
W 20L	3220	25 Platte	4 PR		
W 20L	3220	4 PR	25 Platte		
Wham 30	3240	4 PR	86 Odom		
Wham 30	3240	4 PR	10 B/H		
Wham 30	3240	10 B/H	59 Rice Farmers		
Wham 30	3240	10 B/H	86 Odom		
Wham 30	3240	10 B/H	88 American Rice		
Wham 30	3240	59 Rice Farmers	10 B/H		
Wham 30	3240	88 Odom Ind	4 PR		
Wham 30	3240	88 Odom Ind	10 B/H		
Wham 30	3240	86 Odom Ind	59 Rice Farmers		
Wham 30	3240	86 Odom Ind	88 Amer Rice		
Wham 30	3240	88 Amer Rice	10 B/H		
Wham 5	3260	4 PR	86 Odom		
Wham 5	3260	10 B/H	4 PR		
Wham 5	3260	10 B/H	86 Odom Ind		
Wham 5	3260	86 Odom Ind	88 American Rice		
Wham 5	3260	86 Odom Ind	10 B/H		
Wham 5	3260	88 Odom Ind	4 PR		
Wham 5	3260	88 American Rice	10 B/H		
4# 35's	3340	4 PR	10 B/H	565	20,475
4# 35's	3340	4 PR	15 American		
4# 35's	3340	4 PR	59 Rice Farmers		
4# 35's	3340	10 B/H	4 PR		
4# 35's	3340	10 B/H	15 American		
4# 35's	3340	15 American	4 PR		
4# 35's	3340	59 Rice Farmers	4 PR		
4# 35's	3340	59 Rice Farmers	10 B/H		
4# 35's	3340	88 American Rice	4 PR		
Super Wham 30	3350	4 PR	10 B/H		
Super Wham 30	3350	10 B/H	15 Amer Whse		
Super Wham 30	3350	10 B/H	59 Rice Farmers		
Super Wham 30	3350	10 B/H	86 Odom		
Super Wham 30	3350	10 B/H	78 Odom-Pachuta		
Super Wham 30	3350	15 Amer Whse	86 Odom		
Super Wham 30	3350	15 Amer Whse	10 B/H		
Super Wham 30	3350	59 Rice Farmers	10 B/H		
Super Wham 30	3350	78 Odom Pachuta	86 Odom		
Super Wham 30	3350	78 Odom Pachuta	10 B/H		
Super Wham 30	3350	86 Odom Ind	4 PR		
Super Wham 30	3350	86 Odom Ind	10 B/H		

Transfers Cont'd:

Item No	From	To	Cases/Drums	Gals/Lbs
3350	86 Odorn Ind	15 Amer White		
3350	86 Odorn Ind	59 Roe Farmers		
3360	4 PR	10 B/H		
3360	4 PR	86 Odorn Ind		
3360	10 B/H	4 PR		
3360	10 B/H	86 Odorn Ind		
3360	78 Odorn-Pachuta	86 Odorn Ind		
3360	86 Odorn Ind	4 PR		
3360	88 Odorn Ind	10 B/H		
3360	86 Odorn Ind	78 Pachuta		
3420	4 PR	10 B/H	3,630	127,050
3420	10 B/H	4 PR		
3430	10 B/H	86 Odorn-Waynesboro		
3430	88 Odorn Ind	10 B/H		
3430	10 B/H	78 Pachuta		
3430	78 Odorn-Pachuta	10 B/H		
3430	88 Odorn Ind	78 Pachuta		
15200	97 In Transf	57 HCC Cordete		
15240	10 B/H	57 HCC Cordete		
15240	11 Casco	10 B/H		
15240	20 Gray-Albany	21 Gray-Ashburn		
15240	20 Gray-Albany	57 HCC Cordete		
15240	21 Gray-Ashburn	10 B/H		
15240	21 Gray-Ashburn	20 Gray-Albany		
15240	21 Gray-Ashburn	57 HCC Cordete		
15240	21 Gray-Ashburn	30 AWS		
15240	57 HCC-Cordete	10 B/H		
15240	57 HCC-Cordete	11 Casco		
15240	57 HCC-Cordete	20 Gray-Albany		
15240	57 HCC-Cordete	21 Gray-Ashburn		
15240	57 HCC-Cordete	30 AWS		
15260	10 B/H	4 PR		
15260	10 B/H	21 Gray-Ashburn		
15260	10 B/H	57 HCC Cordete		
15260	20 Gray-Albany	10 B/H		
15260	20 Gray-Albany	21 Gray-Ashburn		
15260	20 Gray-Albany	30 AWS		
15260	20 Gray-Albany	57 HCC Cordete		
15260	21 Gray-Ashburn	10 B/H		
15260	21 Gray-Ashburn	11 Casco		
15260	21 Gray-Ashburn	20 Gray-Albany		
15260	21 Gray-Ashburn	30 AWS		
15260	21 Gray-Ashburn	57 HCC Cordete		
15260	30 AWS	20 Gray-Albany		
15260	57 HCC-Cordete	10 B/H		
15260	57 HCC-Cordete	11 Casco		
15260	57 HCC-Cordete	20 Gray-Albany		
15260	57 HCC-Cordete	21 Gray-Ashburn		
15260	57 HCC-Cordete	30 AWS		
15540	10 B/H	11 Casco		
15540	10 B/H	15 American		
15540	10 B/H	35 Robertson		
15540	10 B/H	57 HCC-Cordete		
15540	11 Casco	10 B/H		
15540	11 Casco	30 AWS		
15540	11 Casco	57 HCC-Cordete		
15540	15 American	57 HCC		
15540	15 American	35 Robertson		
15540	20 Gray-Albany	4 PR		
15540	20 Gray-Albany	15 American		
15540	20 Gray-Albany	35 Robertson		
15540	20 Gray-Albany	57 HCC Cordete		
15540	21 Gray-Ashburn	15 American		
15540	21 Gray-Ashburn	30 AWS		
15540	21 Gray-Ashburn	35 Robertson		
15540	21 Gray-Ashburn	15 American		
15540	30 AWS	15 American		
15540	30 AWS	35 Robertson		
15540	35 Robertson	15 American		

Transfers Cont'd:	Item No	From	To	Cases/Drums	Gals/Lbs
Butox 200 2x2 5	15540	57 HCC-Cordale	10 B/H		
Butox 200 2x2 5	15540	57 HCC-Cordale	15 American		
Butox 200 2x2 5	15540	57 HCC-Cordale	20 Gray-Albany		
Butox 200 2x2 5	15540	57 HCC-Cordale	21 Gray-Ashburn		
Butox 200 2x2 5	15540	57 HCC-Cordale	30 AWS		
Butox 200 2x2 5	15540	57 HCC-Cordale	35 Robertson		
Butox 200 4x1	15560	10 B/H	11 Casco		
Butox 200 4x1	15560	11 Casco	10 B/H		
Butox 200 4x1	15560	11 Casco	35 Robertson		
Butox 200 4x1	15560	15 Amer Whse	35 Robertson		
Butox 200 4x1	15580	20 Gray-Albany	30 AWS		
Butox 200 4x1	15560	20 Gray-Albany	35 Robertson		
Butox 200 4x1	15560	21 Gray-Ashburn	30 AWS		
Butox 200 4x1	15560	57 HCC-Cordale	20 Gray-Albany		
Butox 200 4x1	15560	57 HCC-Cordale	21 Gray-Ashburn		
Butox 200 4x1	15560	57 HCC-Cordale	35 Robertson		
Butox 7500 DF 10x2 32	15580	4 Pit	10 B/H		
Butox 7500 DF 10x2 33	15580	4 Pit	15 American		
Butox 7500 DF 10x2 33	15580	10 B/H	15 American		
Butox 7500 DF 10x2 33	15580	15 American	10 B/H		
Butox 7500 DF 10x2 33	15580	21 Gray-Ashburn	15 American		
Butox 7500 DF 10x2 33	15580	20 Gray-Albany	15 American		
Butox 7500 DF 10x2 33	15580	88 Odom	10 B/H		
Butox 7500 DF 10x2 33	15580	88 Odom	21 Gray-Ashburn		
Butox 7500 DF Bulk	15590	88 Odom	4 pit		
Fromethamine Bulk	17000	4 Pit	31 Mentex		
Fromethamine Bulk	17000	31 Mentex	4 PR		20,714
Fromethamine 25 Kg	17120	10 B/H	4 PR		
Fromethamine 25 Kg	17120	4 PR	31 Mentex		
Fromethamine 25 Kg	17120	4 PR	16 Antwerp	720	39,686
Fromethamine 25 Kg	17120	31 Mentex	4 PR		
Fromethamine 25 Kg	17120	31 Mentex	16 Antwerp		
Ins Ultra Pure 25 Kg	17270	4 PR	16 Antwerp		
Ins Ultra Pure 25 Kg	17270	4 PR	31 Mentex		
Ins Ultra Pure 25 Kg	17270	31 Mentex	4 pit		
OCPI	40150	4 PR	52 Gulf States		27,560
OCPI	40150	52 Gulf States	4 Pit		
OCPI	40150	97 In-Transit	52 Gulf States		335,871
OCPI	40150	97 In-Transit	4 Pit		41,887
ODCB	41000	97 In-Transit	4 PR		
Hi Sol 233	41500	10 B/H	88 Odom-Waynesboro		
2,4 D-B Acid	41550	20 Gray-Albany	57 HCC-Cordale		
2,4 D-B Acid	41550	20 Gray-Albany	88 Odom-Waynesboro		
2,4 D-B Acid	41550	21 Gray-Ashburn	57 HCC-Cordale		
2,4 D-B Acid	41550	88 Odom	10 B/H		
Citric Acid	41580	57 HCC-Cordale	20 Gray-Albany		
Stepwet	41610	10 B/H	88 Odom-Waynesboro		
Con't Clay	41620	10 B/H	88 Odom-Waynesboro		
Ethaphon	41680	4 PR	88 Odom-Waynesboro		
Soprophor	41680	78 Pachuta	88 Odom-Waynesboro		
Molinate	41760	97 In-Transit	4 plant		43,872
Mt 30 gallon Drums	42100	88 Odom	78 Odom-Pachuta		
Mt 30 gallon Drums	42100	88 Odom	4 pit		
Mt 30 gallon Drums	42100	10 B/H	78 Odom-Pachuta		
Mt 30 gallon Drums	42100	4 pit	88 Odom-Waynesboro		
Nitromethane	42680	10 B/H	4 PR		
1 Gal jug mt	44100	20 Gray-Albany	57 HCC-Cordale		
1 Gal jug mt	44100	57 HCC-Cordale	20 Gray-Albany		
2.5 Gal jug mt	44200	57 HCC-Cordale	78 Odom-Pachuta		
2.5 Gal jug mt	44200	57 HCC-Cordale	20 Gray-Albany		
2.5 Gal jug mt	44200	78 Odom-Pachuta	88 Odom-Waynesboro		
2.5 Gal jug mt	44200	88 Odom	78 Odom-Pachuta		
Arquar 2C75	45120	88 Odom	78 Odom-Pachuta		
Irgalite Blue Dye	45130	88 Odom	78 Odom-Pachuta		
1/2 Gal Mt	45150	88 Odom	78 Odom-Pachuta		
Butachlor	45200	88 Odom	78 Odom-Pachuta		

Raw Materials Received:	Item No	Lbs	Condale/Gray	Item No	Gals/Lbs	
OCA	3020					
Plaste Tech	3050					
P Acid	40200	671,640	60 % DMA	41580		
P Anhy	40300	(BU, 192)	Citric Acid	41590		
Raw Materials Received Cont'd:	Item No	Lbs		Item No	Gals/Lbs	Albany
M O	40400		2,4 D-B Acid	41550		
Isoph/Mix	41080	679,280	Jugs-1 gal plastic	44100		
Isoph	40500	43,840	Jugs-2 5 gal Plast	44200		
Emul	40600	223,440				
Aromatic B	40800		Odom-Waynesboro			
Amul	40900		Carbyl Tech	41670		
Mix	41300		Steparse	41600	3,150	
Ethephon	41680		Glycerine	41480		
MCPA-IOE	40930		Albanc	41480		
55 Crystal Litho	42550		HiSil	41500		
55 mt's Black	42300		Poly O	41470		
35 mt's Plastic	42220	3,840	Mohwet	41460		
35 mt's Plastic	42230	351	30 mt's	42100		
Cone Blend			2 5 gal jugs	44200		
Stepfac			Citric Acid	41590		
50L mt's			Veagum	41570		
QDCB	41000	1,486,050	Continental Clay	41620	6,000	
Sulfuric Acid	41010	1,389,400	Kelzan	41510		
Nitric Acid	41020	750,620	DC Antifoam	45140		
Soda Ash	41050		Arquad	45100		
Lime	41060	30,000	Arquar 2C75	45120		
Caustic 50%	41530		Irgalite	45130		
50% Rayon Caus	45090	44,560	Sorpropher 4038	41690		
			Mt 30's Fibre			
Cleaning Solution		4,844	Stepwet	41610	200	
Ethephon	41680		Proxel	41730		
Platinum	41040 (In Trans)		Butachlor	45200		
Catalyst	41070	682	Ucascode	41750		
Peroxide	41080		Odom-Pachuta			
Hydrogen	41030	72,100	2,4 D-B Acid	41550	44,082	
Methanol	42640		Mt 30's	42100		
mt 55's			Transil-N O			
			Odom-Pachuta Cont'd			
TEPA			Ethephon	41680		
Ferrous Sulfate			Gray Dist			
15 gal Mt's			2,4 D-B Acid	41550		In Transit
Sun Oil	41640		2,4 D-B Acid	41550		Albany
Morpholine	41630		DCP1	40150		
55 gal Plastic			TA			
5 mt's	42000		50% Caustic	45090		
30 mt's			Nitromethane	42680		
20 L mt's	42000 Platt		Formaldehyde	41540		
2.5 mt's	44200		Methanol	42640		
			Raney Nickel	42690		
Duron:			Sulfuric Acid	41010		
Heptane	41680		Sodium Bisulfide			
Sulfuric Acid	41520		DMA	42700		
Anhydrous DMA	41650		Calcium Chloride			
			Caustic 50%	41530		
FMC 5-Nitro:			Sulfuric Acid	41520		
Step 3	90800					
Step 4	90810		BlackHawk:			
Step 5	90820		Nitromethane	42680		
Calcium Chloride	90830		2 5 Mt jugs	44200		
Chlorine	90720		Mt 30's	42100		
A Sulfate	90710					
G Acid	90700					
50% Caustic	45090		Actfluorin:			
20% Oleum	90770		50% Caustic	41530	249,780	
Methanol	90780		Mixed Nitrating Ac	41700		
Isobutyl	90740		Acid. Anhydride	41710	2,114,1	
Toluene	90780		98 % Sulfuric Acid	41010		
			Nitric Acid	41020		

Raw Materials Received Cont'd:

Item No	Lbs
93% Sulfuric Acid	90750
Mixed Acid	90730
Sperit Acid	
Etheption:	
PCL3	46220
Ethylene Oxide	46210
Sulfuric Acid	41010
Anhydrous Hcl	46200
Nitrogen	
E Glycol	
Acetone	
Calcium Chloride	
Dover Phos:	
TFP	90910
PE	90950
DCP	90920
Xylene	90940
Methanol	90930
Causac	90970

Acfluorfen Cont'd:

Item No	Gals/Lbs
Ethylene Dichlor	41720
Calcium Chloride	
R118118	90200
Perfene D	41740
	493,000

CYMP:

DICNHL	90840
IPA	90850
HCL	90860
Catalyst	90870

Stanol:

N-Propanol	90320	25,060
Sterol	97100	45,855
Catalyst	97110	1,212
Cyclohexane	97120	6,472

Adjustments to Inventory (Per physical; samples; etc.):

Product	Item No	Location	Type Adj	Cases/Drums	Gals/Lbs							
Propand Tech	3000	4 Plant	Adj-Inv			S	1054	1440	S	702	1420	
DCA	3020	97 In Transit	Adj-Inv			C	3053	5100	S	701	1420	
DCA	3020	100 EMV-No Hungaran	Adj-Inv			C	3053	5100	S	701	1420	
Flaked Tech	3050	4 Plant	Adj-Inv			C	3055	5100	(40,950 00)	S	804	1420
Flaked Tech	3050	10 B/H	Adj-Inv		39,000	C	3055	5100	40,950 00	S	804	1420
Flaked Tech	3050	78 Odom-Pachuta	Adj-Inv		(8,285)	C	184	6835	6,609 75	S	804	1420
Flaked Tech	3050	86 Odom	Adj-Inv			C	184	6835		S	804	1420
Flaked Tech 25 Kg	3060	4 Plant	Adj-Inv			C	955	7700		S	822	1420
Flaked Tech 25 Kg	3060	78 Odom-Pachuta	Adj-Inv	13	717	C	155	6740	(918 50)	S	822	1420
Flaked Tech 25 Kg	3060	88 Odom	Adj-Inv			C	3055	5100		S	822	1420
Duron Std Grade	3030	4 Plant	Adj-Inv		(20,400)	C	3057	5100	56,712 00	S	816	1420
Duron Std Grade	3030	10 B/H	Adj-Inv			C	3057	5100		S	816	1420
Duron Std Grade	3030	97 In Transit	Adj Inv To Quantity Shipped to Customer			C	3057	5100		S	816	1420
Duron B Grade	3040	4 Plant	Adj-Inv		20,400	C	3057	5100	(56,712 00)	S	844	1420
Wham 2x2 5	3180	10 B/H	Adj to Physical			C	3064	5100		S	832	1420
Wham 2x2 5	3180	88 Odom	Adj to Physical	(1,260)	(6,300)	C	184	6740	46,494 00	S	832	1420
4# 55's	3210	4 Plant	damo			C	3067	5100		S	808	1420
4# 20 L	3220	25 Plant	Leaker			C	3067	5100		S	819	1420
Wham 30's	3240	10 B/H	Adj-Inv	(8)	(240)	C	184	6740	1,771 20	S	805	1420
Wham 30's	3240	78 Odom-Pachuta	Adj-Inv	(64)	(1,820)	C	184	6740	14,169 60	S	805	1420
4# Propanil 200L	3250	4 Plant	Label Change			C	3067	5100		S	807	1420
Wham 5	3260	4 Plant	Adj-Inv			C	3064	5100		S	808	1420
Wham 5	3260	10 B/H	Adj-Inv	(7)	(35)	C	184	6740	258 30	S	808	1420
Wham 5	3260	86 Odom	Adj-Inv	(8)	(45)	C	184	6740	332 10	S	808	1420
4# Bulk	3300	4 Plant	Adj-Inv			C	3069	5100		S	817	1420
4# 35	3340	4 Plant	Donation			C	3069	5100		S	814	1420
4# 35	3340	15 American	Adj-Inv			C	3069	5100		S	814	1420
4# 55's	3310	4 Plant	Label Change			C	3069	5100		S	818	1420
4# 210L	3320	4 Plant	Adj-Inv			C	3069	5100		S	836	1420
Super Wham 30 g	3350	15 American	Adj-Inv			C	3064	5100		S	831	1420
Super Wham 30 g	3350	78 Odom-Pachuta	Adj-Inv	33	990	C	184	6740	(7,306 20)	S	831	1420
Super Wham 30 g	3350	86 Odom	Adj-Inv			C	3064	5100		S	831	1420
Super Wham 2x2 5	3360	10 B/H	Adj-Inv			C	3064	5100		S	834	1420
Flrop Tech	3000	4 Plant	Melted F Tech			C	155	6810		S	702	1420
Flake Tech	3050	4 Plant	Melted F Tech			S	804	1420		C	155	6740
Flake Tech	3050	88 Odom-Waynesboro	Adj to Physical			C	184	6835		S	804	1420
Flaked Tech 25 Kg	3060	86 Odom-Waynesboro	Adj to Physical			C	3055	5100		S	822	1420
Wham 2x2 5	3180	10 B/H	Adj to Physical			C	3064	5100		S	832	1420
Wham 30	3240	10 B/H	Samples			C	964	7700		S	806	1420
Wham 30	3240	86 Odom-Waynesboro	Samples			C	964	7700		S	808	1420
Prop 4# 210 L	3320	4 Plant	Adj-Inv			C	3069	5100		S	836	1420
4# 35's	3340	4 Plant	Adj-Inv			C	3069	5100		S	814	1420

Adjustments to Inventory (Per physical; samples; etc.):

Product	Item No	Location	Type Adj	Cases/Drums	Gals/Lbs						
4# 35's	3340	10 B/H	Adj-Inv			C	3069	5100	S	814	1420
Super Wham 30	3350	10 B/H	Adj to Physical	(249)	(7,470)	C	164	6740	55,128 60	S	831 1420 (55,128 60)
Super Wham 2x2 5	3360	86 Odom-Waynesboro	Adj-Inv			C	864	7700	S	834	1420
Super Wham 2x2 5	3360	10 B/H	Adj-Inv			C	3064	5100	S	834	1420
Super Wham 2x2 5	3360	86 Odom	Adj-Inv	(256)	(1,280)	C	164	6740	9,446 40	S	834 1420 (9,446 40)
Super Wham Bulk	3370	86 Odom	Adj-Inv		(3)	C	164	6740	20 58	S	856 1420 (20 58)
Duet 30's	3430	10 B/H	Adj-Inv	(151)	(4,530)	C	159	6740	33,204 90	S	823 1420 (33,204 90)
Duet 30's	3430	78 Odom-Pachuta	Adj-Inv	(159)	(4,770)	C	159	6740	34,964 10	S	823 1420 (34,964 10)
Duet 30's	3430	86 Odom-Waynesboro	Adj-Inv	(108)	(3,240)	C	159	6740	23,749 20	S	823 1420 (23,749 20)
Propand 360 210L	10020	4 Plant	Repackage			C	3067	5100	S	826	1420
Butox 175 2x2 5	15240	57 HCC-Cordele	Inv Adj			C	410	5100	S	410	1420
Butox 175 2x2 5	15240	10 B/H	Inv Adj			C	410	5100	S	410	1420
Butox 175 2x2 5	15240	20 Gray-Albany	Inv Adj			C	410	5100	S	410	1420
Butox 175 4x1	15260	10 B/H	Inv Adj	1	4	C	410	5100	(43 20)	S	410 1420 43 20
Butox 175 4x2	15261	12 Casco	Samples			C	410	7700	S	411	1421
Butox 175 4x1	15260	20 Gray-Albany	Inv Adj			C	410	5100	S	410	1420
Butox 200 2x2 5	15540	10 B/H	For Samples			C	430	7700	S	850	1420
Butox 200 2x2 5	15540	57 HCC-Cordele	Inv Adj			C	430	5100	S	430	1420
Butox 200 2x2 5	15540	20 Gray Albany	Inv Adj			C	430	5100	R	430	1420
Butox 200 2x2 5	15540	15 American	Inv Adj			C	430	5100	S	430	1420
Butox 200 4x1	15560	57 HCC-Cordele	Inv Adj			C	430	5100	S	430	1420
Butox 7500 DF 10x2 33	15580	20 Gray-Albany	Inv Adj			C	420	5100	S	850	1420
Butox 7500 DF 10x2 33	15580	10 B/H	Samples			C	420	7700	S	850	1420
Ethephon	15740	21 Gray-Ashburn	Set Up Finish Goods			C	187	6740	S	851	1420
Ethephon	15740	78 Odom-Pachuta	Set Up Finish Goods								
Tromethamine Bulk	17000	4 Plant	Adj-Inv			C	3683	5100	S	849	1420
Tromethamine Bulk	17000	31 Mentex	Adj-Inv			C	3683	5100	S	849	1420
Tromethamine 25 Kg	17120	4 Plant	Adj-Inv	720	18,000	C	3683	5100	(149,580 00)	S	843 1420 149,580 00
Tromethamine 25 Kg	17120	31 Mentex	Samples	(1)	(55)	C	3683	5100	207 75	S	843 1420 (207 75)
Trometamol 50 Kg	17240	4 Plant	Adj-Inv			C	3683	5100	S	847	1420
Ins Ultra Pure 100Kg	17250	4 Plant	Adj-Inv			C	3683	5100	S	853	1420
Pure Tris-Hcl 100Kg	17260	4 Plant	Adj-Inv			C	3683	5100	S	855	1420
Ins Ultra Pure 25Kg	17270	4 Plant	Adj-Inv			C	3683	5100	S	859	1420
Ins Ultra Pure 25Kg	17270	31 Mentex	Adj-Inv			C	183	6740	S	859	1420
A Mother Liquor	17300	4 Plant	Adj-Inv								
A Hcl Mother Liquor	17310	4 Plant	Adj-Inv								
A Chunks	17320	4 Plant	Adj-Inv								
Ultra Pure Samples	17340	4 Plant	Adj-Inv								
ICPI	40150	97 In Transit	Adj to Physical			C	157	5635	S	715	1460
sophorone	40500	86 Waynesboro	Adj-Inv			C	151	6400	S	717	1460
sophorone	40500	78 Pachuta	Adj-Inv			C	151	6400	S	717	1460
oxflox	40700	86 Odom-Waynesboro	Adj to Physical			C	164	5850	S	753	1460
Amul Emulsifier	40900	78 Odom-Pachuta	Adj to Physical			C	168	5675	S	720	1460
Amul Emulsifier	40900	86 Waynesboro	Adj to Physical			C	151	6400	S	720	1460
IM-2 Emulsifier	40910	4 Plant	Adj to Physical			C	151	6400	S	722	1460
poly Solv	40920	4 Plant	Adj to Physical			C	151	6400	S	723	1460
soda Ash	41050	4 Plant	Sold			C	151	6400	S	708	1460
Morwet	41460	86 Odom-Waynesboro	Adj to Physical			C	164	5850	S	726	1460
olyton O	41470	86 Odom-Waynesboro	Adj to Physical			C	164	5850	S	727	1460
lyoanne	41480	86 Odom-Waynesboro	Adj to Physical		(1,419)	C	164	5850	638 55	S	728 1460 (638 55)
ifonac	41490	86 Odom-Waynesboro	Adj to Physical			C	164	5850	S	729	1460
ISd 233	41500	10 B/H	Adj to Physical			C	164	5850	S	737	1460
elzan	41510	86 Odom-Waynesboro	Adj to Physical			C	164	5850	S	761	1460
ulfuric Acid	41520	4 Plant	Acidfluorten used this raw material			C	182	5850	S	782	1460
0% Caustic	41530	4 Plant	Entered under wrong item #			C	151	6400	S	763	1460
ormaldehyde	41540	4 Plant	Used out of Vinnings Stock			S	8900	1230	S	764	1460
4 D-B Acid	41550	86 Odom-Waynesboro	Adj to Physical			C	410	7700	S	765	1460
ee gum	41570	86 Odom-Waynesboro	Adj to Physical			C	164	5850	S	731	1460
0% DMA	41560	57 HCC-Cordele	Adj to Physical			C	410	5700	S	766	1460
itric Acid	41590	86 Odom-Waynesboro	Adj to Physical			C	164	5850	S	767	1460
itric Acid	41590	57 HCC-Cordele	Adj to Physical			C	164	5850	S	767	1460
epperse	41600	86 Odom-Waynesboro	PO written under wrong item #		(200)	C	164	5850	254 00	S	740 1460 (254 00)
epwet	41610	10 B/H	PO written under wrong item #		200	C	164	5850	(496 00)	S	743 1460 496 00
ornit Clay	41620	10 B/H	Adj to Physical			C	164	5850	S	748	1460
orpholine	41630	4 Plant	Adj-Water Treatment			C	181	6400	S	768	1460
arbaryl Tech	41670	86 Odom-Waynesboro	Adj to Physical			C	164	5850	S	757	1460
thephon	41680	21 Gray-Ashburn	Set Up Finish Good						S	791	1460

Adjustments to Inventory (Per physical; samples; etc.):

Product	Item No	Location	Type Adj	Cases/Drums	Gals/Lbs				
thephon	41680	78 Odom-Pachuta	Set Up Finish Good			C	167	5910	S 791 1460
thephon	41680	86 Odom-Waynesboro	Adj-Inv			C	196	5710	S 791 1460
oprophor	41690	86 Odom-Waynesboro	Adj-Inv		(61)	C	164	5850	114 07 S 809 1460 (114 07)
carcade	41750	86 Odom-Waynesboro	Adj-Inv		(152)	C	164	5650	380 00 S 827 1460 (380 00)
urns 30 plastic	42100	86 Odom-Waynesboro	Adj to Physical			C	164	5870	S 752 1460
urns 30 plastic	42100	4 Plant	Adj - Used for interesting practice			C	164	5870	S 752 1460
urns 30 plastic	42100	10 B/H	Adj to Physical			C	164	5870	S 752 1460
5 m's	42210	4 Plant	Adj-Inv			C	1069	5890	S 738 1460
5 mt black	42300	78 Odom-Pachuta	Adj to Physical			C	1058	5890	S 742 1460
5 mt Crystal	42550	4 Plant	Adj-Inv			S	4	1230	S 756 1460
Aethanol	42640	4 Plant	Clean Out Tank			C	188	6400	S 735 1460
CL	42670	4 Plant	Adj-Inv			C	151	6400	S 758 1460
Atomethane	42680	4 Plant	Adj-Inv			C	183	5850	S 787 1460
Caney Nickel	42690	4 Plant	Adj-Inv			C	183	5850	S 788 1460
Iodium Hypo	42810	4 Plant	Sent to Ponds			C	151	6400	S 789 1460
Hydroxamine Sulfate	42850	4 Plant	Adj to Physical			C	151	6400	S 738 1460
ugs 1	44100	57 HCC-Cordate	Adj-Inv			C	430	5870	S 749 1460
ugs 2 S	44200	57 HCC-Cordate	Shipped per Stanley			C	164	5870	S 759 1460
ugs 2 S	44200	86 Odom-Waynesboro	Adj to Physical			C	164	5870	S 759 1460
ugs 2 S	44200	78 Odom-Pachuta	Adj to Physical			C	164	5870	S 759 1460
Antifoam AF 1500	45000	4 Plant	Transfer to Vinning Stock			S	8900	1230	S 770 1460
MPA	45020	4 Plant	Transfer to Vinning Stock			S	8900	1230	S 772 1460
MIS	45030	4 Plant	Used out of Vigning Stock			S	8900	1230	S 773 1460
Metacure T-1	45040	4 Plant	Transfer to Cedar Stock			S	8900	1230	S 774 1460
0% Rayon Caustic	45080	4 Plant	Transfer to Cedar Stock			S	8900	1230	S 779 1460
0% Rayon Caustic	45090	4 Plant	Entered under wrong item #			C	151	6400	S 792 1460
0% Rayon Caustic	45090	4 Plant	Adj to Physical			C	151	6400	S 782 1460
Arquad	45100	86 Odom-Waynesboro	Adj to Physical			C	158	5850	S 781 1460
Arquar	45120	86 Odom-Waynesboro	Adj to Physical			C	158	5850	S 783 1460
Argalite Blue	45130	86 Odom-Waynesboro	Adj to Physical			C	158	5850	S 784 1460
LC 1500 Antifoam	45140	86 Odom-Waynesboro	Samples			C	164	5850	S 785 1460
55 mt	45150	86 Odom-Waynesboro	Adj to Physical			C	1058	5890	S 786 1460
55 mt	45150	78 Odom-Pachuta	Adj to Physical			C	151	6400	S 788 1460
Butachlor	45200	86 Odom-Waynesboro	Adj to Physical		(53)	C	151	6400	124 55 S 794 1460 (124 55)
Butachlor	45200	78 Odom-Pachuta	Adj to Physical			C	151	6400	S 784 1460
Cane 5 gal m's	42000	4 Plant	Adj to Physical			C	151	6400	S 739 1460
Misc Activity:					Lbs/Gls				
Platinum Purchased									
Platinum	41040	97 In-Transit	Purchased						
Platinum	41040	97 In-Transit	Used						68
OCPI Purchased									
OCPI	40150	97 In-Transit	Purchased R-P			S	715	1460	S 2 1590
OCB	41000	97 In-Transit	Used R-P			S	2	1590	S 703 1460
Diuron Purchased									
Diuron	3030	97 In-Transit	Purchased EMV			C	157	5910	S 3 1590
Diuron	3030	97 In-Transit	Transfer to Inventory			S	816	1420	C 157 6740
DCA	3020	97 In-Transit	Used EMV			S	3	1590	S 701 1420
DCA Purchased									
DCA	3020	97 In-Transit	Purchased Beesterfeld			C	153	5910	S 4 1590
DCA	3020	97 In-Transit	Purchased Rhone-Poulenc			C	153	5910	S 4 1590
DCA	3020	97 In-Transit	Transfer to Inventory			S	701	1420	C 153 6740
OCB	41000	97 In-Transit	Used R-P			S	4	1590	S 703 1460
OCB Purchased									
OCB	41000	97 In-Transit							
Molinate Tech Purchased									
Molinate Tech	41760	97 In-Transit	Purchased EMV		44,874				

CEDAR - WEST HELENA Production & Sales Units	11/30/1999	CC		Prod No	C McGee B Christian		Prod No	Jim Rone File Copy		Prod No	P Fields		Year-To-Date Contracts
		PRODUCE			SOLD			SOLD					
		Drums	bags		Drums	bags		Drums	bags		Drums	bags	
CYMP	5110			73			580			580			30,198
Acifluorfen 100% AI	5120		174,257	86			583	174,257		583			1,681,994
RFG	5250			74			578			578			4,609,320
PowerPhos	5150			72			589			589			109,030
MC 5-Nitro	5290			70			580			580			106,241
Metol	5350		17,722	83			585	17,722		585			32,992
IA	17000			87									
IA 25 Kg	17020												
Pure Tromethamine 25Kg	17120	371	20,450				485	26,733					
Pure Tromethamine 50Kg	17230												
Tromethamine Total								26,733	588				
Trometamol 25 Kg	17220												
Trometamol 50 Kg	17240												
Trs Ultra Pure 100 Kg	17250												
Pure Trs Hcl 100 Kg	17260												
Trs Ultra Pure 25Kg	17270												
Trometamol Total				85					581				
Tech	3000		1,787,920	20			554						
UCA	3020		1,485,841	10			553	301,696					
Duron	3030							386,478					
Duron B Grade	3040												
Total Duron				11				386,478	557				
Duron Col 224 Kg	3070			12					558				
Flake Tech 25 Kg	3060	1,215	66,947				960	52,896					
Flaked Tech	3050		1,012,500	21				550,500					
Total Flake Tech								603,396	555				
# 210L	10020												
# bulk	3200		6,251	23									
# 50 L	3180												
# 20L	3220												
# 200L	3250	120	6,341				100	5,284					
# 55	3210												
# Total								5,284	567				
Wham 2 x2 5	3180												
Wham 5	3260												
Wham 100L	3230												
Wham 30	3240												
Super Wham Bulk	3370												
Super Wham 2x2 5	3360												
Super Wham 30	3350												
Wham Sub-Total				25					564				
Duet 30	3430												
Duet Total				59					559				
Stam bulk	3400		161,833	32									
Stam 35	3420	3,645	127,575										
Stam Total									572				
4# bulk	3300			24									
4# 20 L	3280												
4# 55	3310												
4# 210 L	3320												
4# 200 L	3330												
4# 35	3340	446	15,610				1,500	52,500					
Prop 4# Domestic Sales								52,500	569				
Butoxone 175 4x1	15260												
Butoxone 175 2x2 5	15240												
175 Total				51					591				
Butoxone 200 2x2 5	15540						576	2,880					
Butoxone 200 4x1	15560												
200 Total				52				2,880	594				
Ethephon 100% AI	15740			90					595				
Butox 7500 10x2 33	15580						352	3,520	592				
Butox 7500 Bulk	15590		47,702	53									
KWH								-191,535	101				
Total													
										2,654,691 91			(2,654,691 91)

Finish Goods Standards

Product	Item No	Unit	Per Unit	
Propantil Tech Bulk	3000	lbs	1 01	
PCA-Cedar	3020	lbs	1 02	
Huron	3030	lbs	2 78	
Huron B Grade	3040	lbs	2 78	
Flaked Tech	3050	lbs	1 05	
Flaked Tech 25Kg	3060	kg	2 82	
Huron Col 224 Kg	3070	kg	4 10	
55% Blend	3100	lbs	1 01	
Wham DF (80%) 40#	3150	lbs		1 70
Wham EZ 2x2 5 Gal	3180	gts	7 38	
3# 50 Liter	3190	Lt	1 79	
Propantil 3# bulk	3200	gts	6 11	
Propantil 3# 55 gal	3210	gts	6 79	
Propantil 3# 20L	3220	Lt	1 79	
Wham 100 Liter	3230	Lt	1 85	
Wham 30 gal	3240	gts	7 38	
Propantil 3# 200L	3250	Lt	1 79	
Wham 5 gal	3260	gts	7 38	
Wham 80% 50#	3270	lbs		1 70
Propantil 4# 20L	3290	Lt	2 05	
Propantil 4# Bulk	3300	gts	6 99	
Propantil 4# 55 gal	3310	gts	7 75	
Propantil 4# 210 L	3320	Lt	2 05	
Propantil 4# 200L	3330	Lt	2 05	
Propantil 4# 35 gal	3340	gts	7 75	
Super Wham 30 gal	3350	gts	7 38	
Super Wham 2x2 5 Gal	3360	gts	7 38	
Super Wham Bulk	3370	gts	6 86	
Stam Bulk	3400	gts	7 31	
Stam 35 gal	3420	gts	7 80	
Luet	3430	gts	7 33	
Insemano Alcohol	5340	lbs	3 77	
Propantil 360 210 L	10020	Lt	1 79	
Butox 200 Bulk	15200	gts	10 25	
Butox 175	15240/15260	gts	10 80	
Butox 200	5530/15540/1556	gts	12 28	
Butoxone 7500 DF	15580	Bag	13 65	
Butoxone 7500 DF	15590	Bulk	1 85	
Ethephon	15740	lbs	1 24	
Fromethamine Bulk	17000	lbs	3 77	
Tham 25 Kg	17020	kg	8 31	3 77 lb
Pure Fromethamine 25 Kg	17120	kg	8 31	3 77 lb
Fromethamol 25 Kg	17220	kg	18 50	8 39 lb
Pure Fromethamine 50 Kg	17230	kg	8 31	3 77 lb
Fromethamol 50 Kg	17240	kg	18 50	8 39 lb
Fris Ultra Pure 100 Kg	17250	kg	18 12	8 22 lb
Pure Trn-Hcl 100 Kg	17260	kg	18 12	8 22 lb
Frs Ultra Pure 25 Kg	17270	kg	23 04	10 45 lb

R/M's Standard

Product	Item No	Unit	Per Unit
DCA	40100	lbs	1 05
DCPI	40150	lbs	2 36
P Acid	40200	lbs	24
P Anhydr	40300	lbs	92
MO	40400	lbs	59
Isophor	40500	lbs	58
Frusul	40600	lbs	70
Lowfax 3B2	40700	lbs	7 52
Fenn 500	40800	lbs	15
Armsul	40900	lbs	76
TM-2 Emulsifier	40910	lbs	1 65
PolySolv	40920	lbs	71
MCFA-IOE	40930	lbs	1 78
ODCB	41000	lbs	37
Sulfuro Acid	41010	lbs	04
Nitric Acid	41020	lbs	18
Hydrogen	41030	lbs	1 20

Product	Item No	Unit	Per Unit
Platinum	41040	tr ops	393 00
Roda Ash	41050	lbs	13
R/M's Standard			
Product	Item No	Unit	Per Unit
Lime	41060	lbs	07
Plat Cat	41070	lbs	86 00
Isoph/Mibk	41080	lbs	52
Hydrogen Peroxide	41090	lbs	23
Xylene (Cedar)	41200	lbs	19
Mibk	41300	lbs	47
Vangel	41450	lbs	137
Morewet	41460	lbs	108
Polyfon	41470	lbs	62
Glycer	41480	lbs	45
Alfonac	41490	lbs	78
H Sl	41500	lbs	83
Kelzan	41510	lbs	5 30
Sulfuric Acid 93%	41520	lbs	04
Caustic 50%	41530	lbs	06
Formaldehyde	41540	lbs	11
2,4 D-B Acid	41550	lbs	2 00
Carbon Disulfide	41560	lbs	28
Veegum	41570	lbs	1 85
60% DMA	41580	lbs	60
Citric Acid	41590	lbs	92
Step-sepse DF 200	41600	lbs	1 27
Stepwet DF 95	41610	lbs	2 48
Continental Clay	41620	lbs	08
Morpholine	41630	lbs	1 06
Sun 7N Oil	41640	lbs	16
Anhydrous DMA	41650	lbs	64
High Ounty Heptane	41660	lbs	21
Technical Carbonyl	41670	lbs	3 75
Thiophon	41680	lbs	3 37
Proprophor 4d384	41690	lbs	1 87
Mixed Nitrating Acid	41700	lbs	11
Acetic Anhydride	41710	lbs	38
Ethylene Dichloride	41720	lbs	22
Proxel GXL	41730	lbs	5 12
Perkone D	41740	lbs	33
Ucarcade	41750	lbs	2 50
5 gal/20 L Pis	42000	ea	3 95
10 Mts	42100	ea	15 85
Stam 35	42200	ea	17 90
35 m's	42210	ea	19 50
35 m's Plastic/Stam	42220	ea	15 00
35 m's Plastic/Prop	42230	ea	15 00
55 m's	42300	ea	22 05
55 m's Plastic	42500	ea	22 50
55 m's Crystal Litho	42550	ea	21 60
MITPO Drums	42600	ea	25 55
Sodium Hypo	42610	lbs	08
Caustic 30%	42620	lbs	07
Methal Mercaptan	42630	lbs	78
Methanol 98%	42640	lbs	07
Hydroxamine Sulfate	42650	lbs	1 00
Caustic 17%	42660	lbs	03
Hydrochloric Acid	42670	lbs	05
Nitromethane 99 5%	42680	lbs	1 38
Nickel Catalyst	42690	lbs	7 83
DMA 40% Solution	42700	lbs	47
Unpacks	44000	ea	2 88
Jugs-1 Gal Plastic	44100	ea	43
Jugs-2 5 Gal Plastic	44200	ea	1 38
Antifoam AF 9000	45000	lbs	9 80
Acetone	45010	lbs	35
Dimethylpropionic	45020	lbs	2 83
Glycerol Monostearate	45030	lbs	71

Product	Item No	Unit	Per Unit
Metacure T-1 Catalyst	45040	lbs	12.28
Aethyldethanolamine	45050	lbs	2.15
Troxal GXL Biocide	45060	lbs	5.20
Louline Diisocyanate	45070	lbs	1.33
10% Rayon Grade Caustic	45080	lbs	11
10% Caustic	45090	lbs	08 (Old Rayon Grade)
Arquad 18/29	45100	lbs	1.15
Arquad 2C75	45120	lbs	1.85
Argalite Blue dye	45130	lbs	13.55
IC 1500 Antifoam	45140	lbs	6.30
Drum 55 gal Duron Col	45150	ea	44.95
Butachlor	45200	lbs	2.35
Sodium Cyanide	45300	lbs	90
TEAB	45310	lbs	3.90
Penneco 500/100	45320	lbs	18
36% Hol	45330	lbs	10
Toluene	45340	lbs	15
Rock Salt	45350	lbs	19
Thionyl Chloride	45360	lbs	0.70
DMF	45370	lbs	0.95
Granular Salt	45380	lbs	0.12
55 mt Drums (Cyper)	45390	lbs	29.50
2-4 DB Acid 85%	46000	kg	2.55
Metasulfuron Methyl 80%	46010	kg	118.50
Acido Propionico Puro	46020	kg	1.27
Acido Propionico Usado	46030	kg	1.27
Diclorodinitro 98%	46040	kg	3.00
Propant Tech	46060	kg	3.08
Arston 34	46060	kg	2.26
Arston 180	46070	kg	2.46
Acete Banano	46080	kg	0.11
Oxido Mestisco	46090	kg	2.08
Tolueno	46100	kg	0.79
Anhydrous Hydr Chloride	46200	lbs	0.70
Ethylene Oxide	46210	lbs	0.42
Phosphorus Trichloride	46220	lbs	0.42



facsimile transmittal

To: Chris McGee Fax: 9-1-870-3795

From: Geoff Pratt Date: 12/16/99

Re: MOU Cyclanilide Pages: 7

Phone: 901-684-5373 Cc: David Guffey Joe Mancini
 Jim Rone Randal Tomblin
 Ron Fowler

Urgent For Review Please Comment Please Reply Please Recycle

Dear Chris,

Attached is the MOU that I gave to Serge at the December 15 meeting. Based on that meeting I have changed some of the "Target Dates". Please let me have your thoughts on the MOU. I will send you the first draft of the Final Agreement for your review as soon as R-P preparation.

Regards,

Geoff Pratt

CC: Jim A.
 David G.
 Kevin P.
 Larry M.
 Mike R.
 Neil R.

Cedar Chemical Corporation

LAW OFFICES

APPERSON, CRUMP & MAXWELL, PLC

SUITE 2110

ONE COMMERCE SQUARE

MEMPHIS, TENNESSEE 38105-2318

801 / 525-1711

FACSIMILE 801 / 521-0788

December 10, 1999

EAST OFFICE:

SUITE 100

1785 KIRBY PARKWAY

MEMPHIS, TENNESSEE 38120-4576

801 / 756-6300

FACSIMILE 801 / 757-1296

CHARLES W. METCALF 1840-1924

WILLIAM R. METCALF 1872-1840

JOHN W. APPERSON, 1898-1968

OF COUNSEL

JACKSON, SMIELDS,

YSBER & CANTRELL

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ALLEN Y. MALONE
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ROBERT L. DINKELSPIEL
HENRY L. KLEN
ROBERT J. FINESTEIN
JOHN L. RYDER
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BRUCE M. BRATH
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STEVEN N. DOUGLASS
G. COBLE GARTON
ELIJAH NOEL, JR.
RANDY S. GARDNER
LINDA D. SCHOLL
JANE R. LONG
DAVID P. PRESUDNER
DAVID W. HAWKINS
RICHARD J. MYERS
THOMAS M. TWIBEL
ALLISON M. TWIBEL

*ALSO ADMITTED IN MISSISSIPPI
**ALSO ADMITTED IN DISTRICT OF COLUMBIA

Mr. Geoffrey L. Pratt
Vice President
Cedar Chemical Corporation
24th Floor, Clark Tower
5100 Poplar Avenue
Memphis, TN 38137

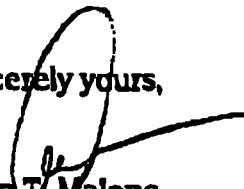
VIA VIP

Re: Memorandum of Understanding with Rhone-Poulenc/Cyclamillide

Dear Geoff:

As you requested yesterday, I am hand delivering the referenced Agreement to your Cedar office so that Melissa can fax it to Rhone-Poulenc. I am faxing this letter and the new draft to the West Helena Plant to your attention so that you will have an opportunity to look it over before it is sent to Rhone-Poulenc. We never discussed the deadlines in Paragraph 3 of the MOU other than the initial deadline of February 1, 2000. Accordingly, I inserted the remaining three deadlines arbitrarily - March 1 for agreement on the Capital Improvements, Product and Raw Material specifications and cost schedule; April 1 for Rhone-Poulenc's preparation and delivery of the proposed Definitive Agreement; and May 1 for completing negotiation and execution of the Definitive Agreement. Does this work?

Sincerely yours,


Allen T. Malone

ATM:cs

Enclosure

cc: West Helena Plant (via fax)

MEMORANDUM OF UNDERSTANDING

THIS MEMORANDUM OF UNDERSTANDING is made and entered into as of the date last below written, by and between

Cedar Chemical Corporation, a Delaware corporation, having its principal place of business at Suite 2414 Clark Tower, 5100 Poplar Avenue, Memphis, Tennessee 38137 (hereinafter referred to as "CEDAR"),

and

Rhône-Poulenc Agro Matières Actives, a French "société en nom collectif" having its registered office at 14/20, rue Pierre Balzet -69009 LYON-France (hereinafter referred to as "Rhône-Poulenc,"

Witnesseth:

- ◆ WHEREAS, Rhône-Poulenc desires to retain an independent third party contractor to toll manufacture for it Cyclanilide, also known as CS-DCA (1-(2,4-dichlorophenyliminocarbonyl)-cyclopropane carboxylic acid) (hereinafter "Product") from 2,4 DCA (2,4 Dichloro aniline) (hereinafter "DCA") and (cyclopropane- 1,1-dicarboxylic acid dimethyl ether (CPDM) (hereinafter "CPDM"), DCA and CPDM together with Sodium Methoxide (hereinafter "NaMO") being sometimes referred collectively herein as the "Raw Materials"; and
- ◆ WHEREAS, CEDAR owns and operates a chemical manufacturing facility located at West Helena, Arkansas which, following installation of certain capital improvements and equipment estimated to cost approximately \$750,000 (the "Capital Improvements"), is deemed capable of producing Product from DCA and CPDM utilizing Rhône-Poulenc's manufacturing process (the "Process") disclosed by Rhône-Poulenc to Cedar pursuant to a Secrecy Agreement between Rhône-Poulenc and Cedar dated as of May 14, 1999 (the "Secrecy Agreement"); and
- ◆ WHEREAS, it is agreed that CEDAR and Rhône-Poulenc shall promptly commence negotiations with each other in good faith with the intent of reaching a definitive agreement (the "Definitive Agreement") satisfactory in form and substance to their respective managements and incorporating the terms and principles set forth herein.

NOW, THEREFORE, in consideration of the premises and the terms and conditions herein contained, the Parties agree as follows:

1. **Purpose.** The purpose of this Memorandum of Understanding is to set forth the terms and principles under which the parties shall negotiate and enter into the Definitive Agreement referred to hereinabove with respect to the toll manufacturing and supply agreement between Cedar and Rhone-Poulenc under which Cedar shall produce Product for Rhone-Poulenc, and under which Cedar shall initiate engineering studies and make equipment purchase commitments to enable it to construct and complete the Capital Improvements in time to begin producing Product for Rhone-Poulenc in the fourth quarter of the year 2000 in the quantities and in accordance with the terms and conditions set forth herein.

2. **Definitive Agreement.** The Definitive Agreement which the parties intend to execute shall include among other terms, the following provisions:

A. **Term.** The initial term shall be from the date of execution of the Definitive Agreement through June 30, 2003, consisting of three (3) contract years (the "Contract Years"). The first Contract Year shall be from the effective date of the Definitive Agreement through June 30, 2001, and the last Contract Year of the initial term shall be for the period July 1, 2002 through June 30, 2003. Thereafter, the term of the Definitive Agreement shall be renewed from year to year unless terminated by either party upon notice to the other not less than one (1) year prior to the end of the initial term or one year prior to the end of any extension of the initial term of Definitive Agreement.

B. **Raw Materials.** Rhone-Poulenc shall be responsible for supplying Cedar, at its cost, the Raw Materials in sufficient quantities to enable Cedar to produce, in continuous campaigns, all quantities of Product ordered by Rhone-Poulenc, provided that in the event Cedar is able to obtain a more favorable price than Rhone-Poulenc for purchase of NaMO, Cedar shall purchase such quantities of NaMO as shall be required for it to perform hereunder, but for the account of Rhone-Poulenc. Cedar shall supply, at its cost, all raw materials other than the Raw Materials and Rhone-Poulenc shall reimburse Cedar its actual cost for the purchase of such raw material within thirty (30) days following the date of Cedar's invoice.

C. **Product.** Rhone-Poulenc shall order and Cedar shall produce from Raw Materials supplied by Rhone-Poulenc not less than four hundred twenty (420) metric tons of Product during the initial term of this Agreement. Not less than eighty (80) metric tons of Product shall be produced by Cedar for Rhone-Poulenc in the first Contract Year, commencing in the fourth quarter of the year 2000; not less than one hundred sixty (160) metric tons shall be ordered by Rhone-Poulenc and produced by Cedar during the second Contract Year; and not less than one hundred eighty (180)

metric tons shall be ordered by Rhone-Poulenc and produced by Cedar in the third Contract Year, and in each subsequent Contract Year.

D. **Scheduling.** Rhone-Poulenc shall submit its orders for Product to be produced by Cedar in each calendar year during the term hereof by no later than July 1 of the previous Contract Year, provided that its firm order for Product to be produced by Cedar in the first Contract Year shall be set forth in the Definitive Agreement.

E. **Raw Material Usage.** Maximum usage factors applicable to consumption of Raw Materials (expressed in kilograms of Raw Materials consumed per kilogram of Product) shall be determined based on actual results achieved during the production of the initial eighty metric tons of Product during the initial campaign. Thereafter, to the extent that any over-consumption of Raw Materials (+ 3.5%) shall be for Cedar's account. The savings on any under-consumption of Raw Materials shall be shared equally by the parties.

F. **Capital Improvements.** Cedar's cost of Capital Improvements shall be amortized over the minimum four hundred twenty (420) metric tons of Product to be produced by Cedar and paid for by Rhone-Poulenc during the initial term of the Definitive Agreement. For example, if the agreed cost of the Capital Improvements for which Rhone-Poulenc shall be responsible is \$750,000.00, any shortfall in the minimum quantity of Product produced by Cedar and paid for by Rhone-Poulenc in any Contract Year during the initial term of the Definitive Agreement shall require that Rhone-Poulenc pay to Cedar within thirty (30) days following the last day of such Contract Year that number of kilograms of Product produced by Cedar during such Contract Year less than the minimum quantity specified for such Contract Year at \$1.79 per kilogram.

G. **Startup.** Rhone-Poulenc shall provide reasonable technical assistance to Cedar during startup of the initial campaign.

H. **Waste Disposal.** The parties shall cooperate to determine the most cost effective and environmentally sound method to dispose of wastes generated by production of Product. Costs of waste disposal shall be for Rhone-Poulenc's account.

I. **Toll Fees.** Cedar's toll manufacturing fees for production of Product for Rhone-Poulenc during the initial term shall be \$8.00 per kilogram for all Product produced in the year 2000; \$7.00 per kilogram for Product ordered by Rhone-Poulenc for production by Cedar in a continuous campaign of at least one hundred fifty (150) metric tons in each subsequent calendar year; and \$6.50 per kilogram for any continuous production campaign of more than two hundred (200) metric tons in a single year. The parties shall agree on an escalation formula by which the fees may

be adjusted annually to reflect increases in manufacturing costs. Cedar shall invoice Rhone-Poulenc at the end of each month during the term of the Definitive Agreement for all quantities of Product produced thereunder, at the applicable toll manufacturing fee, and for all raw materials (including NaMO) purchased by Cedar hereunder. Such invoices shall be due and payable by Rhone-Poulenc thirty (30) days from date of invoice.

J. Miscellaneous. The Definitive Agreement shall contain additional terms and provisions normally contained in agreements of this nature.

3. Schedule of Target Dates.

A. On or before ~~February 1~~, ^{March 31,} 2000, Cedar shall submit to Rhone-Poulenc detailed engineering drawings describing the Capital Improvements, and its final estimated cost to install the Capital Improvements and Rhone-Poulenc shall have delivered to Cedar its detailed specifications for Product and Raw Materials.

B. On or before ~~March 1~~, ^{April 31} ~~May 1st~~, 2000, the parties shall have reached final agreement concerning the documents describing the Capital Improvements, including the agreed cost of same to be amortized over the initial term of Definitive Agreement. The parties shall have also reached written agreement as to the Product and Raw Material specifications. Such documents shall be used as Exhibits to the Definitive Agreement. The Capital Improvements documents shall include a schedule of the costs incurred and to be incurred by Cedar while negotiation of the Definitive Agreement is pending. All such costs and contractual commitments incurred by Cedar as set out in such schedule of costs shall be for Rhone-Poulenc's account, either for amortization and reimbursement in accordance with the provisions of Paragraph 2F hereinabove, or, alternatively, in the event that, following good faith negotiations, either party determines that it cannot reach agreement with the other party on the terms of the Definitive Agreement, or, in any event, if the Definitive Agreement is not executed by the parties on or before May 1, 2000, or, if the Definitive Agreement is executed by the parties, but is subsequently terminated for reasons other than for default by Cedar prior to the end of the initial term, such costs (to the extent incurred by Cedar and unamortized) shall be paid in full by Rhone-Poulenc to Cedar upon the occurrence of any such event.

C. On or before ~~April 1~~, ^{March} 2000, Rhone-Poulenc shall prepare and deliver to Cedar a proposed first draft of the Definitive Agreement.

D. On or before May 1, 2000, the parties shall obtain final approval of their respective managements and execute the Definitive Agreement.

4. **Binding Agreement.** The provisions of this Memorandum of Understanding are binding upon the parties in accordance with the terms hereof; provided, however, the parties shall be bound by the terms of the proposed toll manufacturing agreement between Cedar and Rhone-Poulenc subject to, and only in accordance with the terms of, the Definitive Agreement contemplated hereby, when as approved by the parties' respective managements.

Executed by the parties, acting by and through their authorized representatives, as of the dates appearing below.

CEDAR CHEMICAL CORPORATION

By: _____

Date: _____

RHÔNE-POULENC AGRO MATIÈRES ACTIVES

By: _____

Date: _____



facsimile transmittal

To: Fax: 9-1-870-3795

From: Geoff Pratt Date: 12/16/99

Re: MOU Cyclanilide Pages: 7

Phone: 901-684-5373

cc. David Guffey Joe Mancini
 Jim Rone : Randal Tomblin
 Ron Fowler

Urgent For Review Please Comment Please Reply Please Recycle

Dear Chris,

Attached is the MOU that I gave to Serge at the December 15 meeting. Based on that meeting I have changed some of the "Target Dates". Please let me have your thoughts on the MOU. I will send you the first draft of the Final Agreement for your review as soon as R-P prepares it.

Regards

Geoff Pratt

Cedar Chemical Corporation
 5100 Poplar Avenue, Ste 2414
 Memphis, TN 38137
 901-684-5371

LAW OFFICES
APPERSON, CRUMP & MAXWELL, PLC

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ONE COMMERCE SQUARE
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December 10, 1999

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CHARLES W. METCALF, 1890-1894
WILLIAM R. METCALF, 1872-1898
JOHN W. APPERSON, 1898-1885

OF COUNSEL
JACKSON, SHIELDS,
YEISER & CANTRELL

CHARLES METCALF CRUMP
JOHN B. MAXWELL, JR.
ALLEN T. MALONE
PHILIP G. KADINSKY
ROBERT L. DINKELSPÖEL
HENRY L. KLEIN
ROBERT J. PINSTEIN
JOHN L. RYDER
THOMAS R. BUCKNER
BRUCE M. SMITH
TODD CAMPBELL PARKER
STEVEN N. DOUGLASS
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ELIJAH NOEL, JR.
RANDY S. GARDNER
LINDA D. SCHOLL
JANE R. LONG
DAVID R. FREDRICKS
DAVID W. HAWKINS
RICHARD J. MYERS
THOMAS M. TWISL
ALLISON M. TWISL

*ALSO ADMITTED IN MISSISSIPPI
**ALSO ADMITTED IN DISTRICT OF COLUMBIA

Mr. Geoffrey L. Pratt
Vice President
Cedar Chemical Corporation
24th Floor, Clark Tower
5100 Poplar Avenue
Memphis, TN 38197

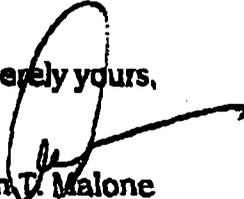
VIA VIP

Re: Memorandum of Understanding with Rhone-Poulenc/Cyclamillide

Dear Geoff:

As you requested yesterday, I am hand delivering the referenced Agreement to your Cedar office so that Melissa can fax it to Rhone-Poulenc. I am faxing this letter and the new draft to the West Helena Plant to your attention so that you will have an opportunity to look it over before it is sent to Rhone-Poulenc. We never discussed the deadlines in Paragraph 3 of the MOU other than the initial deadline of February 1, 2000. Accordingly, I inserted the remaining three deadlines arbitrarily - March 1 for agreement on the Capital Improvements, Product and Raw Material specifications and cost schedule; April 1 for Rhone-Poulenc's preparation and delivery of the proposed Definitive Agreement; and May 1 for completing negotiation and execution of the Definitive Agreement. Does this work?

Sincerely yours,


Allen T. Malone

ATM:cs
Enclosure
cc: West Helena Plant (via fax)

MEMORANDUM OF UNDERSTANDING

THIS MEMORANDUM OF UNDERSTANDING is made and entered into as of the date last below written, by and between

Cedar Chemical Corporation, a Delaware corporation, having its principal place of business at Suite 2414 Clark Tower, 5100 Poplar Avenue, Memphis, Tennessee 38137 (hereinafter referred to as "CEDAR"),

and

Rhône-Poulenc Agro Matières Actives, a French "société en nom collectif" having its registered office at 14/20, rue Pierre Balzet -69009 LYON-France (hereinafter referred to as "Rhône-Poulenc,"

Witnesseth:

- ◆ WHEREAS, Rhône-Poulenc desires to retain an independent third party contractor to toll manufacture for it Cyclanilide, also known as CS-DCA (1-(2,4-dichlorophenylaminocarbonyl)-cyclopropane carboxylic acid) (hereinafter "Product") from 2,4 DCA (2,4 Dichloro aniline) (hereinafter "DCA") and (cyclopropane- 1,1-dicarboxylic acid dimethyl ether (CPDM) (hereinafter "CPDM"), DCA and CPDM together with Sodium Methoxide (hereinafter "NaMO") being sometimes referred collectively herein as the "Raw Materials"; and
- ◆ WHEREAS, CEDAR owns and operates a chemical manufacturing facility located at West Helena, Arkansas which, following installation of certain capital improvements and equipment estimated to cost approximately \$750,000 (the "Capital Improvements"), is deemed capable of producing Product from DCA and CPDM utilizing Rhône-Poulenc's manufacturing process (the "Process") disclosed by Rhône-Poulenc to Cedar pursuant to a Secrecy Agreement between Rhône-Poulenc and Cedar dated as of May 14, 1999 (the "Secrecy Agreement"); and
- ◆ WHEREAS, it is agreed that CEDAR and Rhône-Poulenc shall promptly commence negotiations with each other in good faith with the intent of reaching a definitive agreement (the "Definitive Agreement") satisfactory in form and substance to their respective managements and incorporating the terms and principles set forth herein.

NOW, THEREFORE, in consideration of the premises and the terms and conditions herein contained, the Parties agree as follows:

1. **Purpose.** The purpose of this Memorandum of Understanding is to set forth the terms and principles under which the parties shall negotiate and enter into the Definitive Agreement referred to hereinabove with respect to the toll manufacturing and supply agreement between Cedar and Rhone-Poulenc under which Cedar shall produce Product for Rhone-Poulenc, and under which Cedar shall initiate engineering studies and make equipment purchase commitments to enable it to construct and complete the Capital Improvements in time to begin producing Product for Rhone-Poulenc in the fourth quarter of the year 2000 in the quantities and in accordance with the terms and conditions set forth herein.

2. **Definitive Agreement.** The Definitive Agreement which the parties intend to execute shall include among other terms, the following provisions:

A. **Term.** The initial term shall be from the date of execution of the Definitive Agreement through June 30, 2003, consisting of three (3) contract years (the "Contract Years"). The first Contract Year shall be from the effective date of the Definitive Agreement through June 30, 2001, and the last Contract Year of the initial term shall be for the period July 1, 2002 through June 30, 2003. Thereafter, the term of the Definitive Agreement shall be renewed from year to year unless terminated by either party upon notice to the other not less than one (1) year prior to the end of the initial term or one year prior to the end of any extension of the initial term of Definitive Agreement.

B. **Raw Materials.** Rhone-Poulenc shall be responsible for supplying Cedar, at its cost, the Raw Materials in sufficient quantities to enable Cedar to produce, in continuous campaigns, all quantities of Product ordered by Rhone-Poulenc, provided that in the event Cedar is able to obtain a more favorable price than Rhone-Poulenc for purchase of NaMO, Cedar shall purchase such quantities of NaMO as shall be required for it to perform hereunder, but for the account of Rhone-Poulenc. Cedar shall supply, at its cost, all raw materials other than the Raw Materials and Rhone-Poulenc shall reimburse Cedar its actual cost for the purchase of such raw material within thirty (30) days following the date of Cedar's invoice.

C. **Product.** Rhone-Poulenc shall order and Cedar shall produce from Raw Materials supplied by Rhone-Poulenc not less than four hundred twenty (420) metric tons of Product during the initial term of this Agreement. Not less than eighty (80) metric tons of Product shall be produced by Cedar for Rhone-Poulenc in the first Contract Year, commencing in the fourth quarter of the year 2000; not less than one hundred sixty (160) metric tons shall be ordered by Rhone-Poulenc and produced by Cedar during the second Contract Year; and not less than one hundred eighty (180)

metric tons shall be ordered by Rhone-Poulenc and produced by Cedar in the third Contract Year, and in each subsequent Contract Year.

D. **Scheduling.** Rhone-Poulenc shall submit its orders for Product to be produced by Cedar in each calendar year during the term hereof by no later than July 1 of the previous Contract Year, provided that its firm order for Product to be produced by Cedar in the first Contract Year shall be set forth in the Definitive Agreement.

E. **Raw Material Usage.** Maximum usage factors applicable to consumption of Raw Materials (expressed in kilograms of Raw Materials consumed per kilogram of Product) shall be determined based on actual results achieved during the production of the initial eighty metric tons of Product during the initial campaign. Thereafter, to the extent that any over-consumption of Raw Materials (+ 3.5%) shall be for Cedar's account. The savings on any under-consumption of Raw Materials shall be shared equally by the parties.

F. **Capital Improvements.** Cedar's cost of Capital Improvements shall be amortized over the minimum four hundred twenty (420) metric tons of Product to be produced by Cedar and paid for by Rhone-Poulenc during the initial term of the Definitive Agreement. For example, if the agreed cost of the Capital Improvements for which Rhone-Poulenc shall be responsible is \$750,000.00, any shortfall in the minimum quantity of Product produced by Cedar and paid for by Rhone-Poulenc in any Contract Year during the initial term of the Definitive Agreement shall require that Rhone-Poulenc pay to Cedar within thirty (30) days following the last day of such Contract Year that number of kilograms of Product produced by Cedar during such Contract Year less than the minimum quantity specified for such Contract Year at \$1.79 per kilogram.

G. **Startup.** Rhone-Poulenc shall provide reasonable technical assistance to Cedar during startup of the initial campaign.

H. **Waste Disposal.** The parties shall cooperate to determine the most cost effective and environmentally sound method to dispose of wastes generated by production of Product. Costs of waste disposal shall be for Rhone-Poulenc's account.

I. **Toll Fees.** Cedar's toll manufacturing fees for production of Product for Rhone-Poulenc during the initial term shall be \$8.00 per kilogram for all Product produced in the year 2000; \$7.00 per kilogram for Product ordered by Rhone-Poulenc for production by Cedar in a continuous campaign of at least one hundred fifty (150) metric tons in each subsequent calendar year; and \$6.50 per kilogram for any continuous production campaign of more than two hundred (200) metric tons in a single year. The parties shall agree on an escalation formula by which the fees may

be adjusted annually to reflect increases in manufacturing costs. Cedar shall invoice Rhone-Poulenc at the end of each month during the term of the Definitive Agreement for all quantities of Product produced thereunder, at the applicable toll manufacturing fee, and for all raw materials (including NaMO) purchased by Cedar hereunder. Such invoices shall be due and payable by Rhone-Poulenc thirty (30) days from date of invoice.

J. **Miscellaneous.** The Definitive Agreement shall contain additional terms and provisions normally contained in agreements of this nature.

3. **Schedule of Target Dates.**

A. On or before ^{March 31,} ~~February 1,~~ 2000, Cedar shall submit to Rhone-Poulenc detailed engineering drawings describing the Capital Improvements, and its final estimated cost to install the Capital Improvements and Rhone-Poulenc shall have delivered to Cedar its detailed specifications for Product and Raw Materials.

B. On or before ³¹ March ~~X,~~ 2000, the parties shall have reached final agreement concerning the documents describing the Capital Improvements, including the agreed cost of same to be amortized over the initial term of Definitive Agreement. The parties shall have also reached written agreement as to the Product and Raw Material specifications. Such documents shall be used as Exhibits to the Definitive Agreement. The Capital Improvements documents shall include a schedule of the costs incurred and to be incurred by Cedar while negotiation of the Definitive Agreement is pending. All such costs and contractual commitments incurred by Cedar as set out in such schedule of costs shall be for Rhone-Poulenc's account, either for amortization and reimbursement in accordance with the provisions of Paragraph 2F hereinabove, or, alternatively, in the event that, following good faith negotiations, either party determines that it cannot reach agreement with the other party on the terms of the Definitive Agreement, or, in any event, if the Definitive Agreement is not executed by the parties on or before May 1, 2000, or, if the Definitive Agreement is executed by the parties, but is subsequently terminated for reasons other than for default by Cedar prior to the end of the initial term, such costs (to the extent incurred by Cedar and unamortized) shall be paid in full by Rhone-Poulenc to Cedar upon the occurrence of any such event.

C. On or before ^{March} ~~April~~ 1, 2000, Rhone-Poulenc shall prepare and deliver to Cedar a proposed first draft of the Definitive Agreement.

D. On or before May 1, 2000, the parties shall obtain final approval of their respective managements and execute the Definitive Agreement.

4. **Binding Agreement.** The provisions of this Memorandum of Understanding are binding upon the parties in accordance with the terms hereof; provided, however, the parties shall be bound by the terms of the proposed toll manufacturing agreement between Cedar and Rhone-Poulenc subject to, and only in accordance with the terms of, the Definitive Agreement contemplated hereby, when as approved by the parties' respective managements.

Executed by the parties, acting by and through their authorized representatives, as of the dates appearing below.

CEDAR CHEMICAL CORPORATION

By: _____

Date: _____

RHÔNE-POULENC AGRO MATIÈRES ACTIVES

By: _____

Date: _____



Internal Correspondence

Approved: James H. Rome
Signature

File

To: Attendees (Distribution)
CC: ✓ C. McGee
From: David C. Guffey
Date: 16 December 1999
RE: Meeting minutes—Cyclanilide Technical Review 15 December 1999
Attachments: (a) Preliminary Schedule, (b) Action Items, (c) DRAFT Final Product Specification

The meeting opened with a general discussion of the intent of the technical review and the desire to answer all questions possible in order to move forward with a detailed plant design for Cyclanilide. Pierre LaRoy (RP) described the relationship of the Rhone-Poulenc process and the Degussa-Huls plant operation: the Degussa plant was an existing facility and was not designed specifically for Cyclanilide. RP developed Cyclanilide, Degussa improved/changed the process and now licenses the process back to RP.

Discussion began regarding timing of the project. The preliminary project schedule was then developed (attached). Serge Ravet noted that 80-100 metric tons are required by the end of the year 2000.

Dr. A. Dinculescu discussed the process chemistry and brought out potential improvements to the process (see Action Items 1-3, attached). While noting the differences in the RP and Degussa processes, P. LaRoy noted that during the hydrolysis step, the RP process adds NaOH to ensure completion of the reaction—temperature control must be maintained to avoid degradation products. Additionally, after the CPDM addition in the Coupling step, agitation is crucial as the sodium salt precipitates out of solution.

P. LaRoy indicated that the twenty (20) theoretical stages for distillation listed in the Degussa-Huls technical package are simply what was available. The required stages for separation are on the order of six (6) to eight (8) stages in the column. A safe maximum is ten (10) stages in the column.

S. Ravet distributed "DRAFT" copies of the final product specification (attached).

D. Guffey presented time cycle estimate and preliminary engineering flow diagrams (EFD). Several discussion points were brought out during the presentation and noted on the copies of the diagrams:

- a. NaMethoxide charge time should be shortened from the estimated eight (8) hours to three (3) hours.
- b. Coupling column should contain 8-10 theo. stages.
- c. Coupling reactor should not be glass lined steel—potential basic conditions resulting in corrosion. [RP Merit Note, ¶ 5.1.3 suggests glass lined reactor]
- d. Coupling reactor may need new agitator design.

- e. No product should be left behind after transfer from Coupling reactor—yield loss and potential quality issue.
- f. Coupling product can be washed from the system and made more flowable by water addition. Consider adding the water for the hydrolysis in the Coupling reactor and transferring to the Hydrolysis reactor.
- g. Consider addition of a hold tank for the aqueous phase from Hydrolysis.
- h. Consider transferring the aqueous phase from hydrolysis and completing the acidification in the Centrifuge Feed Tank.
- i. Toluene recovery column should contain 6-8 theo. stages.
- j. May need a water wash of the Toluene recovery overheads to remove MeOH.

Distribution

Cedar Chemical Corp.

A. Dinculescu

W. Gastrock

S. Hale

J. Mancini via fax

G. Pratt via fax

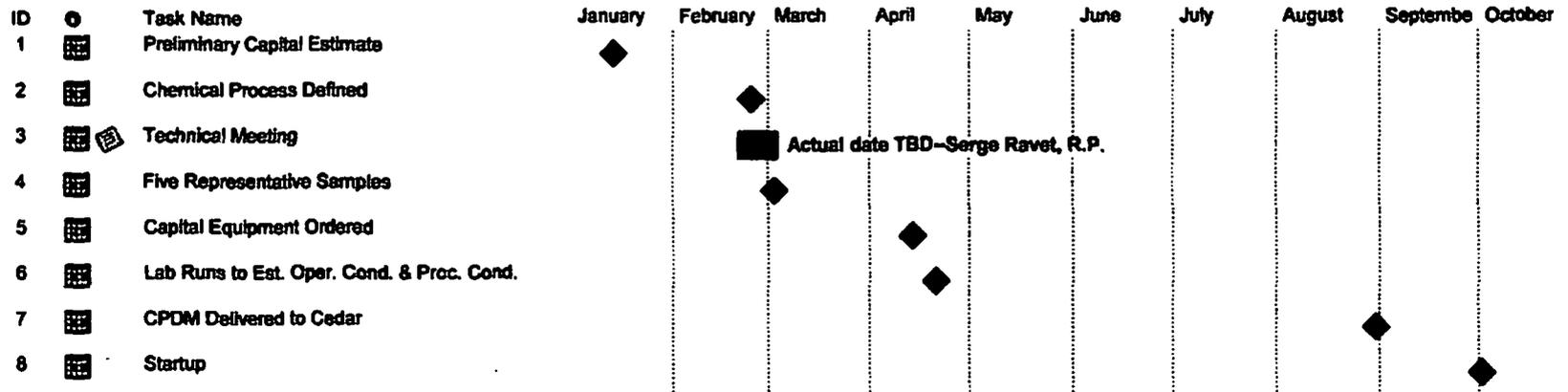
J. Rone

Rhone-Poulenc Agro

Pierre LaRoy via fax 33-4-72-85-20-66

Serge Ravet via fax 33-4-72-85-20-58

Rhone-Poulenc Cyclanilide RPA 90946 Preliminary Schedule



Rhone-Poulenc RPA 90946 (Cyclanilide)

Action Items

Meeting Date: 15-Dec-99

Attending: Cedar Chemical
A. Dinculescu
W. Gastrock
D. Guffey
S. Hale
J. Mancini
G. Pratt
J. Rone

Rhone-Poulenc
P. LaRoy
S. Ravet

Action Item No.	Action Item	Person(s) Responsible	Target Date
15D99-01	Test Xylene v. Toluene for reaction solvent	A.D. & P.L.	14-Jan-00
15D99-02	Test Formic Acid v. Sulfuric Acid as Acidification agent	A.D. & P.L.	14-Jan-00
15D99-03	Test KOH v. Sodium Methoxide as Coupling reagent	A.D. & P.L.	14-Jan-00
15D99-04	Test R.P. v. DeGussa-Huls Coupling & Hydrolysis procedures	A.D. & P.L.	04-Feb-00
15D99-05	Finalize operating conditions & generate final material balance	A.D. & P.L.	25-Feb-00
15D99-06	Generate five (5) representative samples for Series 61/62	A.D. & P.L.	TBD by RP*
15D99-07	Ship S.61/62 samples to Frankfurt	A.D. & P.L.	TBD by RP
15D99-08	Analysis of S.61/62 samples	P.L.	TBD by RP
15D99-09	Generate Series 61/62 documentation	Rhone-Poulenc	TBD by RP
15D99-10	File Series 61/62 documentation	Rhone-Poulenc	TBD by RP
15D99-11	Agitator design for service (viscous)	P.L.	25-Feb-00
15D99-12	Corrosion concerns of Coupling reaction for glass lined steel	P.L.	04-Jan-00
15D99-13	Safety dossier w/industrial hygiene, ST classification, etc.	P.L.	17-Mar-00
15D99-14	Safety review	D.G. & P.L.	07-Apr-00
15D99-15	Waste Streams—Composition & Disposition	P.L.	04-Feb-00
15D99-16	Technical info regarding Dryer transmitted to P.L.	D.G.	04-Feb-00
15D99-17	Technical details of toluene recovery from phase split to D.G.	P.L.	18-Feb-00
15D99-18	Aqueous waste recovery design	D.G. & P.L.	18-Feb-00
15D99-19	TOSCA status of all raw materials	S.R. & G.P.	04-Jan-00

* TBD: To Be Determined

4. ANALYTICAL SPECIFICATIONS

DRAFT

Determinations	Methods of analysis		Specifications (g/kg)		Frequency
	Reference	Routine	Manufacturing	Commercial standard	
• Appearance	Visual	Visual	White powder	White powder	each batch
• CYCLANILIDE content	C.817.06.95	C.817.06.95	960 min.	960 min.	each batch
• Water	CIPAC MT 30.1	CIPAC MT 30.1	5 max.	5 max.	each batch
• Toluene	C.816.06.95	C.816.06.95	1 max.		each batch
• Process Impurities					
- RPA 116741 (imp. A)	C.821.07.95	C.821.07.95	3 max.		each batch
- 2, 4 dichloroaniline	C.821.07.95	C.821.07.95	1 max.		each batch
- RPA 090945	C.821.07.95	C.821.07.95	10 max.		each batch
- RPA 111030	C.821.07.95	C.821.07.95	10 max.		each batch
- RPA 114924	C.821.07.95	C.821.07.95	15 max.		each batch
- RPA 093903	C.821.07.95	C.821.07.95	01 max.		each batch
- RPA 090899	C.821.07.95	C.821.07.95	1 max.		each batch

draft

PROPRIÉTÉ CONFIDENTIELLE RHÔNE-POULENC AGRO

Please
File



Internal Correspondence

To: Peter Fields
CC: C. McGee, J. Rone
From: David C. Guffey
Date: 17 December 1999
RE: Cyclanilide 90946 Project—Projected Waste Costs *REVISED*

Please be advised that we are currently investigating a new project for Rhone-Poulenc Agro, Cyclanilide 90946, with a projected startup of mid next year. Following are the preliminary worst-case waste figures based on a 15 hour cycle time with a 3,900 lb/batch (2Trains) payload:

Organic Waste:

<u>Component</u>	<u>Daily Prod'n (lb/day)</u>	<u>% of Stream</u>	<u>Est. Volume (gal/day)</u>
Water	16.6	0.3	2.0
Toluene	1,917.8	33.2	264.6
Methanol	3,459.2	59.8	525.7
Others (Heavies)	389.4	6.7	Solid in Sol'n

Aqueous Waste (Case I):

<u>Component</u>	<u>Daily Prod'n (lb/day)</u>	<u>% of Stream</u>	<u>Est. Volume (gal/day)</u>
Water	2,210.7	57.0	2555.8
Sodium Formate	1,667.7	43.0	Solid in Sol'n

Aqueous Waste (Case II):

<u>Component</u>	<u>Daily Prod'n (lb/day)</u>	<u>% of Stream</u>	<u>Est. Volume (gal/day)</u>
Water	12,965.1	88.6	2555.8
Sodium Formate	1,667.7	11.4	Solid in Sol'n

Please estimate waste costs on a *per lb.* basis for this project and disposal options—*i.e. transfer to ponds, incineration, landfill, etc.*)

Please File

SECURITY AGREEMENT

This Agreement is made and entered as of the date last below written by and between:

Rhône-Poulenc Agro Matières Actives, a French "société en nom collectif" with a capital of 640 250 000 French Francs with its registered office at 14/20, rue Pierre Baizet - 69009 LYON - FRANCE, registered in Lyon under number B 399 135 532,

Represented by Mr Hans MOSER, Strategic Purchasing Director, Business Development,

Hereinafter referred to as "RPAMA",

as the first Party,

And

Cedar Chemical Corporation, a company duly organised under — law with offices at 5100 POPLAR Avenue, MEMPHIS, TN 38137 USA,

Represented by Mr Geoffrey L. PRATT, Vice President

Hereinafter referred to as "CEDAR",

as the second Party,

Witnesseth:

- ◆ WHEREAS, RPAMA and CEDAR have entered into a certain Secrey Agreement dated as of May 14th, 1999 in relation to the exchange of technical and proprietary information of a confidential nature, including manufacturing and formulation know-how for the manufacture and formulation of Cyclanilide or CS-DCA;
- ◆ WHEREAS, pursuant to a certain Patent and Technical License Agreement dated July 12th, 1999 RPAMA has obtained the right from DEGUSSA-HÜLS to divulge certain valuable technical and proprietary information of a confidential nature of DEGUSSA-HÜLS origin relating to the production of CS-DCA (hereinafter referred to as "the DEGUSSA-HÜLS Confidential Information") to RPAMA's toll manufacturers provided such toll manufacturers agree to be bound by the confidentiality and non-use obligations under the Patent and Technical License Agreement;

- ◆ WHEREAS, RPAMA and CEDAR are interested in exchanging the DEGUSSA-HÜLS Confidential Information for the purpose of evaluating their interest to enter into a toll manufacturing or purchase agreement, or any similar agreement, of CS-DCA (hereinafter "the Purpose").

NOW, THEREFORE, in consideration of the premises and the terms and conditions herein contained the Parties have agreed as follows:

Clause 1. DEFINITIONS

"Affiliate(s)" means any entity that directly or indirectly, through one or more intermediaries, now or hereafter controls or is controlled by or is under common control with a Party hereto, except in countries where ownership of a majority or controlling interest by a foreign entity is not permitted by law, rule or regulations, the parent's direct or indirect voting interest may be less than a majority or controlling interest.

"Control" (including the terms "controls", "controlled by", "controlling" and "under common control with") are understood as meaning the possession, direct or indirect, of the power to direct or cause the direction of the management and policies of a person or entity whether through the ownership of voting security, by contract or otherwise.

"CEDAR" means CEDAR and its Affiliates.

"DEGUSSA-HÜLS" means DEGUSSA-HÜLS and its Affiliates.

"RPAMA" means RPAMA and its Affiliates.

"Third Party" means any Party other than RPAMA, CEDAR, DEGUSSA-HÜLS and/or their Affiliates.

Clause 2. SECRECY

- 2.1. During the term of this Agreement, CEDAR agrees to hold in trust and confidence and not to disclose to any Third Party, nor to use for its own purposes other than the toll manufacture of CS-DCA for and on behalf of RPAMA any and all of the DEGUSSA-HÜLS Confidential Information disclosed to it by RPAMA under this Agreement.

- 2.2. CEDAR agrees to make available such DEGUSSA-HÜLS Confidential Information only to those of its employees who need to have access to it to carry out the toll manufacture of CS-DCA and shall cause such employees to be bound by the confidentiality and non-use obligations provided herein.
- 2.3. CEDAR shall be responsible for any breach of the confidentiality and non-use obligations provided herein by such employees, whether or not such employees continue to be employees of CEDAR.
- 2.4. CEDAR agrees to return promptly, free of charge, all of the DEGUSSA-HÜLS Confidential Information which is in written form to RPAMA at any time, upon RPAMA's request.
- 2.5. Any documents, drawings, electronic media and other material containing any part of the DEGUSSA-HÜLS Confidential Information shall be destroyed by shredding into pieces or returned to RPAMA upon expiration or termination of this Agreement.
- 2.6. CEDAR's obligations of non-disclosure does not apply to such information and document, which:
 - at the time of the disclosure are generally available to the public; or
 - after disclosure become generally available to the public through no fault of CEDAR; or
 - CEDAR can prove to have been in its lawful possession at the time of disclosure by RPAMA.

Clause 3. LIMITATION OF RIGHT

Nothing herein contained shall be construed as granting to a Party any right, including any license, either express or implied, under any Confidential Information disclosed to a Party by another Party hereunder, except for a license to use the Confidential Information to conduct the evaluation as contemplated by the Agreement.

L.

Clause 4. DURATION

This Agreement shall become effective as from the date of its last signature by the parties hereto. Unless terminated earlier or otherwise extended by mutual agreement in writing, this Agreement shall terminate one (1) year later, except for the confidentiality obligations set forth in Clause 2 which shall survive termination or expiration of this Agreement for a period of five (5) years following termination or expiration under article 6.1 of the Patent and Technical License Agreement dated July 12th, 1999 between RPAMA and DEGUSSA-HÜLS.

Clause 5. AMENDMENT

No amendment or consensual cancellation of this Agreement or any provisions or terms thereof and no extension of time or waiver or relaxation or suspension of any of the provisions or terms of this Agreement shall be binding unless recorded in a written document signed by the Parties. Any such extension, waiver or relaxation or suspension which is so given or made shall be strictly construed as relating to the matter in respect whereof it was made or given.

Clause 6. ENTIRETY

This Agreement contains the entire understanding between the Parties hereto regarding the subject matter hereof, and cancels and supersedes all previous agreements, representations and understandings, written or oral between the Parties hereto regarding the subject matter hereof.

Clause 7. ASSIGNMENT

The rights and obligations of this Agreement cannot be assigned to a Third Party by a Party without the prior written consent of the other Party.

Clause 8. APPLICABLE LAW

This Agreement shall be interpreted and construed in accordance with, and its performance shall be governed by French law.

IN WITNESS WHEREOF, the Parties hereto have caused this Agreement to be duly executed as of the day and year last below written.

Rhône-Poulenc Agro Matières Actives



Name: Hans MOSER

Title: Strategic Purchasing Director,

Business Development

Date: 12.14.99

Cedar Chemicals Corporation



Name: Geoffrey L. PRATT

Title: Vice President

Date: November 22, 1999.

CEDAR - WEST HELENA
 Raw materials used - Finish goods used - Packaged - Mfg -
 Shipments - Receipts
 12/31/1999

CC C McGee
 B. Christian
 P. Fields

Jim Rone
 File Copy

Item No	Std Factor	Usage Factor	Raw Materials Used	Finish Goods		Mfg'd	Dr	Cr
				Used	Pkg'd			
DCA	3020					1,499,253		
ODCB	41000	1.1300	1 1193	1,678,066			S 701 1420 1,529,238 06	C 153 6740 (1,529,238 06)
Nitric Acid	41020	.4970	0 5109	768,040			C 153 5520 620,884 42	S 703 1460 (620,884 42)
Sulfuric Acid	41010	.9550	1 0110	1,515,819			C 153 5540 122,566 40	S 705 1460 (122,566 40)
Flat/Carb Cat	41070	.0003	0 0005	799			C 153 5530 60,632 76	S 704 1460 (60,632 76)
Hydrogen	41030	.0510	0 0487	73,055			S 711 1460 (68,714 00)	
Soda Ash	41050	0110	0 0011	1,696			C 153 5570 87,668 00	S 708 1460 (87,668 00)
Lime	41060	0305	0 0283	39,381			C 153 5850 76,235 83	S 708 1460 (220 48)
50% Rayon Caustic	45090	.0182	0 0187	28,076			S 709 1460 (2,755 27)	
Hydrogen Peroxide	41080	0050	0 0087	10,000			S 792 1460 (2,248 08)	
Methanol	42840						S 790 1460 (2,300 00)	
TEPA		0008	0 0009	1,395			S 735 1460	
Ferrous Sulfate		0001	0 0001	162				
Propantil Tech	3000					2,022,458		
DCA-3rd Party	40100	0 7550					S 702 1420 2,042,682 58	C 154 6740 (2,042,682 58)
DCA-Cedar	3020	0 7550	0 7843		1,588,238		C 154 5630 710 1460	
P Acid	40200	0 3707	0 3240	655,236			C 154 6840 1,617,883 18	S 701 1420 (1,617,883 18)
P Anthy	40300	0 0150	0 0905	182,960			C 154 5640 157,256 64	S 712 1460 (157,256 64)
							C 154 5650 168,323 20	S 714 1460 (168,323 20)
Flaked Tech	3050					804,000		
P Tech	3000	1 000	1 000		804,000		S 804 1420 844,200 00	C 155 6740 (844,200 00)
							C 155 6810 812,040 00	S 702 1420 (812,040 00)
3#	3200					2,784		
P Tech	3000	3 2159	3 3944		9,450		S 802 1420 17,010 24	C 161 6740 (17,010 24)
Isoph	40500	2 2500	2 1767	6,060			C 161 6810 9,544 50	S 702 1420 (9,544 50)
MO	40400						C 161 5680 3,393 60	S 717 1460 (3,393 60)
Emul	40600	0 0143					C 161 5660 716 1460	
Aromatic B	40800	1 8120	1 9289	5,370			C 161 5670 718 1460	
Amul	40900	1 2683	1 4080	3,920			C 161 5685 805 50	S 719 1460 (805 50)
Sun Oil	41640	0 4300	0 4670	1,300			C 161 5675 2,979 20	S 720 1460 (2,979 20)
Tenneco 500	45320						C 161 5850 208 00	S 769 1460 (208 00)
Cone Blend							C 161 5685	S 797 1460
Steptac								
4#	3300					-5,392		
P Tech	3000	4 1500					S 817 1420 (37,690 08)	C 162 6740 37,690 08
F Tech	3050						C 162 6810 702 1420	
Isoph	40500	0 7200					C 162 6835 804 1420	
M O	40400	2 7400					C 162 5680 717 1460	
Emul	40600	0 9250					C 162 5680 716 1460	
IsoMibk	41080						C 162 5670 718 1460	
Aromatic B	40800						C 162 5760 721 1460	
Amul	40900						C 162 5685 719 1460	
							C 162 5675 720 1460	
4# X	3300						S 817 1420	C 162 6740
P Tech	3000	4 1270					C 162 6810 702 1420	
M O	40400	1 7620					C 162 5660 716 1460	
Isoph	40500	1 6880					C 162 5680 717 1460	
Emul	40600	0 7820					C 162 5670 718 1460	
Aromatic B	40800	0 0503					C 162 5685 719 1460	
Amul	40900	0 3944					C 162 5675 720 1460	
Sun Oil	41640	0 3041					C 162 5850 769 1460	
RiceSolo	3130					73,410		
P Tech	3000	3 1300	3 1142		228,610		S 861 1420 1,120,970 70	C 168 6740 (1,120,970 70)
Molinate	41760	3 1300	3 0274	222,244			C 168 6810 230,898 10	S 702 1420 (230,898 10)
Emul	40600	0 9000	0 4365	32,047			C 168 5850 622,283 20	S 828 1460 (622,283 20)
Wk Emul	40610		0 6546	48,052			C 168 5670 56,069 30	S 718 1460 (22,432 90)
Aromatic B	40800	2 4800	1 8353	134,730			S 829 1460 (33,636 40)	
							C 168 5685 20,209 50	S 719 1460 (20,209 50)

Item No	Std Factor	Usage Factor	Raw Materials Used	Finish Goods		
				Used	Pkg'd	Mfg'd
Stam	3400					253,424
P Tech	3000	4.1270	4 2106	1,087,080		
F Tech	3050					
Isoph/Mibk	41080	3.9280	3 8528	976,390		
Emul	40600	0 9030	0 8918	226,000		
Isoph	40500					
MO	40400					

		Dr		Cr	
S	811	1420	1,852,529.44	C	170 6740 (1,852,529.44)
C	170	6810	1,077,730.60	S	702 1420 (1,077,730.60)
C	170	6835		S	804 1420
C	170	5780	507,722.80	S	721 1460 (507,722.80)
C	170	5670	158,200.00	S	718 1460 (158,200.00)
C	170	5680		S	717 1460
C	170	5660		S	716 1460

Item Description	Item No	Total Qty's	
		R/M's	FIG's
Propanil Tech	3000		2,109,120
Flake Tech	3050		
M O	40400		
Isoph	40500	6,060	
Emul	40600	258,047	
Emul C6173	40610	48,052	
Aromatic B	40800	140,100	
Arnul	40900	3,920	
Isoph/Mibk	41080	976,390	
Sun Oil	41640	1,300	
Malinate	41760	222,244	
Tenneco 500	45320		

3# Packaged:	Item No	Mt Drms	Bulk	Full Drms
3# 60L	3190	13 210		
3# 55's	3210	55,000		
3# 200L's	3250	52 840		51
Propanil 360 210L's	10020	55,480		
3# Bulk	3200	2,695	2,695	
3# 20L Used	3220			
3# 200L Used	3250			
35's	42210			
55M's	42300	51		
55 Mt's Black	42550			

S	854	1420		C	167 6740 (18,258.00)
S	808	1420			
S	807	1420	18,258.00		
S	828	1420			
C	167	6820	16,468.45	S	802 1420 (16,468.45)
				S	819 1420
				S	807 1420
C	1087	5890	1,124.55	S	738 1460 (1,124.55)
				S	742 1460
				S	756 1460

3# 20L	Item No	Mt Drms	Bulk	Full Drms
3# Bulk	3200	5 280		
Mt 20L	42000			
4# Packaged:	Item No	Mt Drms	Bulk	Full Drms
Propanil 4# 20L	3290	5 280		
4# 55's	3310	55,000		
Propanil 4# 210L	3320	55 480		
Propanil 4# 200L	3330	52 840		
Cedar Blue Drum 35 gal	3340	35,000		
4# bulk	3300			
35 m's	42210			
Mt 20L	42000			
35 m's Plastic	42230			
55 m's	42300			
55 m's	42550			

S	819	1420		C	160 6740
C	160	6820		S	802 1420
C	1060	5890		S	739 1460
S	812	1420		C	169 6740
S	818	1420			
S	838	1420			
S	839	1420			
S	814	1420			
C	169	6830		S	817 1420
C	1069	5890		S	738 1460
				S	739 1460
				S	793 1460
				S	742 1460
				S	756 1460

Stam Packaged:	Item No	Mt Drms	Bulk Used	Full Drms
Stam 35's	3420	35,000		7,105
bulk	3400	248,675	248,675	
35 m's	42220		7,105	
RiceSolo Packaged:	Item No	Mt Drms	Bulk Used	Full Drms
RiceSolo 30's	3080	30,000		2,447
bulk	3130	73,410	73,410	
30 m's	42100		2,447	

S	813	1420	1,939,665.00	C	172 6740 (1,939,665.00)
C	172	6825	1,817,814.25	S	811 1420 (1,817,814.25)
C	1072	5890	106,575.00	S	780 1460 (106,575.00)
S	862	1420	1,161,348.20	C	168 6740 (1,161,348.20)
C	168	6825	1,120,970.70	S	861 1420 (1,120,970.70)
C	1068	5890	38,784.95	S	752 1460 (38,784.95)

Duron Prod'n:	Item No	Std	Act	R/M Used	FIG Prod
Duron Standard Grade	3030				
Duron B Grade	3040				
DCPI	40150	0.8340			
DMA	41650	0.2100			
Heptane	41660	0.0716			
Sulfuric Acid	41520				
50% Rayon Caustic	45090				

S	818	1420		C	157 6740
S	844	1420			
C	157	5635		S	715 1460
C	157	5610		S	744 1460
C	157	5850		S	745 1460
				S	762 1460
				S	782 1460

Item No	Std	Act	R/M Used	F/G Prod					
Stanol Prod'n:									
Stanol	5350								
Sterol	97100	0 1452	6,173	F/G Prod	25,568	Kg			
N-Propanol	90320	0 3148	13,380						
Catalyst	97110								
Hydrogen	41030						S 8500	1230	S 706 1460
Pentabrom Prod'n:									
Pentabrom	5160			F/G Prod	42,506				
Red Acid (produced)	95540				11,839				
Diphenyl Oxide	91000	0 5950	25,290						
Bromine	91010	2 5882	110,013						
50% Caustic	45090								S 792 1460
TAP	91020	0 2669	11,345						
Acifluorfen Prod'n:									
Acifluorfen	5120			F/G Prod	140,827	100% AI			
Mixed Nitrating Acid	41700						C 182	5850	48,588 50 S 806 1460
Perkone D	41740	0 1200							S 828 1460
Acetic Anhydride	41710	0 7200	0 6965						S 807 1460
Sulfuric Acid	41010	0 2400	0 1415				C 182	5530	796.00 S 704 1460
Nitric Acid	41020	0 2600	0 2525				C 182	5540	5,680 84 S 705 1460
Ethylene Dichloride	41720								S 808 1460
50% Caustic	41530	1 2000	1 3538						S 763 1460
Soda Ash	41050								S 708 1460
R118118	90200	3 5400	2.8173						398,190
TA Prod'n:									
TA Prod'n	17000			F/G Prod			S 849	1420	C 183 6740
Nitromethane	42680	7600					C 183	5580	S 787 1460
Formaldehyde	41540	2 5000					C 183	5580	S 764 1460
Methanol	42640	.2460					C 183	5850	S 735 1460
Sulfuric Acid	41520	.0660							S 782 1460
Raney Nickel	42690	0110					C 183	5600	S 788 1460
Hydrogen	41030	.1420					C 183	5570	S 706 1460
50% Caustic	41530	1000							S 792 1460
FMIC 5-Nitro Prod'd:									
5-Nitro	5290			F/G Prod		100% AI			
Step 3	90800								
Step 4	90810								
Step 5	90820								
Calcium Chloride	90830								
Chlorine	90720								
A Sulfate	90710								
G Acid	90700								
50% Caustic	45090						S 8000	1230	S 792 1460
20% Oleum	90770								
Methanol	90790								
Soda Ash	90740								
Toluene	90760								
93% Sulfuric Acid	90750								
Mixed Acid	90730								
CYMP Prod'd:									
CYMP	5110			F/G Prod		100% AI			
DICNIL	90840								
IPA	90850								
50% Caustic	41530						S 9000	1230	S 763 1460
Catalyst	90870								
Hydrogen	41030						C 190	5570	S 706 1460
HCl	90860								
DoverPhos Prod'd:									
DoverPhos	5150			F/G Prod					
Therminol	90900								
TTP	90910								
2,4 DCP	90920								
Methanol	90930								
Methanol	42640						S 8900	1230	S 735 1460
Xylene	90940								
PE	90850								
Phenol	90960								
Caustic	90970								

Packaged Plant:		Item No	Std	Act	R/M's	FG's	Cases	Gals/Lbs						
Pure Trom 25 Kg Pkg'd	17120	55 120					353	19,457						
Tromethamine Bulk Used	17000			19,457		19,457			C	183	6740	(73,335 75)	S	843 1420 73,335 75
Trometamol 25 Kg	17220								S	183	6860	73,352 89	S	849 1420 (73,352.89)
Trometamol 50 Kg	17240								C	845	1420		C	181 6740
Tris Ultr Pure 100Kg	17250	220 480							C	181	6740		S	847 1420
Pure Tris-Hcl 100Kg	17260	220 480							C	181	6740		S	853 1420
Tris Ultrapure 25kg	17270	55 120					682	37,592	C	181	6740	(141,685.50)	S	855 1420
Tromethamine Bulk Used	17000			37,592		37,560			S				S	859 1420 141,685.50
Wham Packaged:	Item No	Std	Act	R/M's	FG's	Cases	Gals/Lbs							
Wham 2x2 5	3180								C	181	6880	141,601 20	S	849 1420 (141,601 20)
Wham 100L	3230								S	832	1420		C	164 6740 (1,107 00)
Wham 30	3240								S	828	1420			
S Wham 30	3350						(196)	(5,680)	S	805	1420	(43,394 40)		
S Wham 2x2.5's	3360						207	6,210	S	831	1420	45,829.80		
S Wham Bulk	3370						(36)	(180)	S	834	1420	(1,328.40)		
S Wham 2x2.5's Used	3360								S	856	1420			
Flaked Tech	3050	4 1240	400 0000		60,000				C	164	6835	63,000.00	S	834 1420
Morwet	41460	0 0970	11 6800	1,752					C	164	6835	21,667 48	S	804 1420 (63,000 00)
Polyfon O	41470	0.0100	0 7333	110					C	164	5850		S	726 1460 (1,892.16)
Glycerine	41480	0 2430	25.9600	3,694									S	727 1460 (88.20)
Altonio	41490	0 3690											S	728 1460 (1,752.30)
Kelzan	41510	0.0050	1 2400	186									S	729 1460
Veegum	41570	0 1170	13 2333	1,885									S	761 1460 (985.80)
Antifoam DC 1500	45140	0.0010	0.2333	35									S	731 1460 (3,672 25)
Technical Cerbyl	41670	0 0070	0 7000	105									S	785 1460 (220.50)
Ethephon	41680	0.0400	0.6000	90									S	757 1460 (393 75)
Soprophor 4D384	41690	0.1460	41 0667	6,160									S	791 1460 (303.30)
Proxel	41730												S	809 1460 (11,519 20)
Formaldehyde													S	825 1460
Glutaraldehyde	41750		2 2933	344									S	827 1460 (860 00)
Citric Acid	41590												S	767 1460
30 m's	42100			409					C	164	5870	6,482 65	S	752 1460 (6,482 65)
30 m's @ Pachuta	42100												S	752 1460
2.5 m's	44200												S	759 1460
Duet Packaged:	Item No	Std	Act	R/M's	FG's	Cases/Drums	Gals/Lbs							
Duet 30	3430								S	823	1420		C	159 6740
Flaked Tech	3050								C	159	6835		S	804 1420
Veegum	41570								C	159	5850		S	731 1460
Glycerine	41480												S	728 1460
Soprophor	41690												S	809 1460
Morwet	41460												S	726 1460
Polyfon O	41470												S	727 1460
Ethephon	41680												S	791 1460
Proxel	41730												S	825 1460
Formaldehyde													S	825 1460
Antifoam	45140												S	785 1460
Bensulfuron Methyl Tech													S	761 1460
Kelzan	41510												S	761 1460
30 m's	42100								C	159	5870		S	752 1460
Total Flaked Tech Used	3050					60,000								
Flake Tech Packaged:	Item No	Std	Act	R/M's	FG's	Cases	Gals/Lbs							
Inside Plant:														
Flake Tech 25Kg	3060					435	23,969		S	822	1420	30,667 50	C	155 6740 (30,667 50)
Flake Tech Used	3050		1 0003		23,976				C	155	6835	25,174 80	S	804 1420 (25,174.80)
Outside Plant:														
Flake Tech 25Kg	3060								S	822	1420		C	155 6740
Flake Tech Used	3050								C	155	6835		S	804 1420
Butoxone 7500 Produced:	Item No	Std	Act	R/M's	FG's	Cases	Gals/Lbs							
Outside Plant:														
Butoxone DF 7500 Bulk	15590								S	860	1420		C	420 6740
Butoxone DF 7500	15580								S	420	1420		C	420 6740
Butoxone DF 7500 Bulk Used	15590								C	420	6870		S	860 1420
2,4 D-B Acid	41550	.7650							C	420	5510		S	765 1460
Continental Clay	41620	.1640							C	420	5850		S	746 1460
Hj Sil 233	41500	.0050							C				S	737 1460
Stepspere DF 200	41600	.0600							C				S	740 1460
Stepwet DF 65	41610	.0050							C				S	743 1460
Inside Plant:														
Butoxone DF 7500	15580								S	850	1420		C	420 6740
Butoxone DF 7500 Bulk Used	15590								C	420	6870		C	860 1420

Item No	Std	Act	R/M's	F/G's	Cases	Gals/Lbs											
Butox 175 Packaged:																	
Butoxone 175 4x1	15260					-5	-20			S	410	1420	(218 00)	C	410	6740	218.00
Butox 200 Bulk Used	15200	0 8152								C	410	6850		S	430	1420	
2 4, D B Acid	41550	1.8000	-131.9500	2,639						C	410	5510	5,278.00	S	765	1460	(5,278 00)
60% DMA	41580	0.8000	-486 6000	8,732						C	410	5700	5,839 20	S	766	1460	(5,839 20)
Citric Acid	41590	0 2800								C	410	5705		S	767	1460	
Jugs	44100									C	410	5870		S	749	1460	
Butoxone 175 2x2 5	15240					-60	-300			S	410	1420	(3,240 00)	C	410	6740	3,240 00
Butox 200 Bulk Used	15200	0 8152								C	410	6850		S	430	1420	
2 4, D B Acid	41550	1 8000								C	410	5510		S	765	1460	
60% DMA	41580	0.8000								C	410	5700		S	766	1460	
Citric Acid	41590	0 2800								C	410	5705		S	767	1460	
Jugs	44200									C	410	5870		S	759	1460	
Butoxone 175 65	15270									S	410	1420		C	410	6740	
Butox 200 Bulk Used	15200	0 8152								C	410	6850		S	430	1420	
2 4, D B Acid	41550	1 8000								C	410	5510		S	765	1460	
60% DMA	41580	0.8000								C	410	5700		S	766	1460	
Butox 175 Pkg'd (cont'd)	Item No	Std	Act	R/M's	F/G's	Cases	Gals/Lbs			C	410	5705		S	767	1480	
Citric Acid	41590	0 2800															
Butox 200 Packaged:	Item No	Std	Act	R/M's	F/G's	Cases	Gals/Lbs			S	430	1420		C	430	6740	
Butoxone 200 4x1	15560									C	430	6850		S	824	1420	
Butox 200 Bulk Used	15200	1 0000								C	430	5510		S	765	1460	
2 4, D B Acid	41550	2.0800								C	430	5700		S	766	1460	
60% DMA	41580	1.1000								C	430	5705		S	767	1460	
Citric Acid	41590	0.4200								C	430	5870		S	749	1460	
Jugs-1 gal plastic	44100									C	430	5870		S	749	1460	
HCC-Cordello Cont'd:																	
Butox 200 Packaged Cord	Item No	Std	Act	R/M's	F/G's	Cases	Gals/Lbs			S	430	1420	(17,683 20)	C	430	6740	17,683.20
Butoxone 200 2x2.5	15540					-288	-1,440			C	430	6850		S	824	1420	
Butox 200 Bulk Used	15200	1 0000								C	430	5510		S	765	1460	
2 4, D B Acid	41550	2 0800								C	430	5700		S	766	1460	
60% DMA	41580	1.1000								C	430	5705		S	767	1460	
Citric Acid	41590	0 4200								C	430	5870		S	759	1460	
Jugs-2 5 gal plastic	44200									S	430	1420		C	430	6740	
Butoxone 200 55	15570									C	430	6850		S	824	1420	
Butox 200 Bulk Used	15200	1 0000								C	430	5510		S	765	1460	
2 4, D B Acid	41550	2 0800								C	430	5700		S	766	1460	
60% DMA	41580	1 1000								C	430	5700		S	766	1460	
Citric Acid	41590	0.4200								C	430	5705		S	767	1460	

Shipped from Plant:

Item No	Location	Containers	lbs/gals
Prop Tech	3000	4	Plant
DCA	3020	4	Plant
Diuron	3030	4	Plant
Flake Tech	3050	4	Plant
Flake Tech 25KG	3060	4	Plant
RiceSolo 30's	3080	4	Plant
3# 50 L	3190	4	Plant
3# Bulk	3200	4	Plant
3# 55's	3210	4	Plant
3# 20L	3220	4	Plant
3# 200L	3250	4	Plant
4# 20L	3290	4	Plant
4# Bulk	3300	4	Plant
4# 55's	3310	4	Plant
4# 210 L	3320	4	Plant
4# 200 L	3330	4	Plant
4# 35's	3340	4	Plant
Stam Bulk	3400	4	Plant
Stam 35's	3420	4	Plant
Propanil 360 210L	10020	4	Plant
Ethephon 100%	15740	4	Plant
Tromethamine Bulk	17000	4	Plant
Tham 25 KG	17020	4	Plant
Tromethamine 25KG	17120	4	Plant
Trometamol 50KG	17240	4	Plant
Tns Ultra Pure 100Kg	17250	4	Plant
Pure Tns-Hcl 100Kg	17260	4	Plant
Tns Ultra Pure 25Kg	17270	4	Plant
MO	40400	4	Plant
Isoph	40600	4	Plant

Shipped from Plant Cont'd:

Item No	Location	Containers	lbs/gals
4# Emul	4 Plant		
Emul	4 Plant		
TA-40 Waste Water	4 Plant		

Shipped from O/S Plant:

Item No	Location	Containers	lbs/gals
DCA	97 In Transit		
Diuron Std	10 B/H		83,600
Diuron Std	52 Gulf States		119,049
Diuron Std	97 In Transit		(551,591)
Diuron B Grade	4 Pt		
Flaked Tech	3050 10 B/H		1,042,500
Flaked Tech	3050 78 Odom-Pachuta		
Flaked Tech	3050 88 Odom		
Flaked Tech 25Kg	3060 78 Odom-Pachuta		
Flaked Tech 25Kg	3060 86 Odom		
Diuron Cal 224 Kg	3070 88 Odom		
Wham! EZ 2x2.5 gal	3180 10 B/H		
Wham! EZ 2x2.5 gal	3180 86 Odom		
Wham 100 Liter	3230 86 Odom		
Wham 30gls	3240 10 B/H		
Wham 30gls	3240 59 Rice Farmers		
Wham 30gls	3240 78 Odom-Pachuta		
Wham 30gls	3240 86 Odom		
Wham 30gls	3240 88 Amer Rice		
Wham 5gls	3260 10 B/H		
Wham 5gls	3260 88 Odom		
Wham 5gls	3260 88 Amer Rice		
4# 35	3340 10 B/H	2,500	87,500
4# 35	3340 15 Amer Whse		
4# 35	3340 59 Rice Farmers		
Super Wham 30	3350 10 B/H		
Super Wham 30	3350 15 Amer Whse		
Super Wham 30	3350 59 Rice Farmers		
Super Wham 30	3350 78 Odom-Pachuta		
Super Wham 30	3350 88 Odom		
Super Wham 2x2.5	3360 10 B/H		
Super Wham 2x2.5	3360 88 Odom		
Super wham Bulk	3370 86 Odom		
Stam 35	3420 10 B/H	2,860	100,100
Duet 30	3430 10 B/H		
Duet 30	3430 78 Odom-Pachuta		
Duet 30	3430 88 Odom		
Butox 200 Bulk	15200 57 HCC-Cordele		
Butox 175 2x2.5	15240 10 B/H		
Butox 175 2x2.5	15240 20 Gray-Albany		
Butox 175 2x2.5	15240 21 Gray-Ashburn		
Butox 175 2x2.5	15240 30 AWS		
Butox 175 2x2.5	15240 57 HCC-Cordele		
Butox 175 4x1	15260 10 B/H		
Butox 175 4x1	15260 11 Cascio		
Butox 175 4x1	15260 20 Gray-Albany		
Butox 175 4x1	15260 21 Gray-Ashburn		
Butox 175 4x1	15260 30 AWS		
Butox 175 4x1	15260 57 HCC-Cordele		
Butox 200 2x2.5	15540 10 B/H		
Butox 200 2x2.5	15540 15 American W/H	360	1,800
Butox 200 2x2.5	15540 20 Gray-Albany		
Butox 200 2x2.5	15540 21 Gray-Ashburn		
Butox 200 2x2.5	15540 30 AWS		
Butox 200 2x2.5	15540 35 Robertson		
Butox 200 2x2.5	15540 57 HCC-Cordele		
Butox 200 4x1	15560 10 B/H		
Butox 200 4x1	15560 11 Cascio		
Butox 200 4x1	15560 15 American W/H		
Butox 200 4x1	15560 20 Gray-Albany		
Butox 200 4x1	15560 21 Gray-Ashburn		
Butox 200 4x1	15560 30 AWS		
Butox 200 4x1	15560 35 Robertson		
Butox 200 4x1	15560 57 HCC-Cordele		

Shipped from Q/S Plant Cont'd:

	Item No	Location	Containers	Ibs/gals
Butox 7500 10x2.33	15580	10 B/H		
Butox 7500 10x2.33	15580	15 American W/H	100	2,330
Butox 7500 10x2.33	15580	20 Gray-Albany		
Butox 7500 10x2.33	15580	21 Gray-Ashburn		
Butox 7500 10x2.33	15580	86 Odom		
Butox 7500 10x2.33	15580	30 AVVS		
Elhephon	15740	78 Odom-Pachuta		
Tromethamine 25Kg	17120	31 Mentex	216	11,908
Tromethamine 25Kg	17120	16 Antwerp	30	1,654
Tris Ultra Pure 25 Kg	17270	31 Meritex	12	681
2,4 DB Acid	41550	87 In Trans		
Mt 30 gal drum	42100	86 Odom-Waynesboro		

Transfers:

	Item No	From	To	Cases/Drums	Gals/Lbs
DCA	3020	4 Pit	87 In Trans		
DCA	3020	4 Pit	100 EMV-Hungary		
DCA	3020	97 In Transit	4 Pit		
DCA	3020	97 In Transit	52 Gulf States		
DCA	3020	97 In Transit	100 EMV-Hungary		
DCA	3020	100 EMV-Hungary	4 Pit		
Duron	3030	4 Pit	10 B/H		
Duron	3030	4 Pit	86 Odom		
Duron	3030	10 B/H	4 Pit		
Duron	3030	10 B/H	86 Odom		
Duron	3030	78 Odom-Pachuta	4 Pit		
Duron	3030	86 Odom	78 Odom-Pachuta		
Duron	3030	97 In Transit	52 Gulf States		
Duron B Grade	3040	4 Pit	10 B/H		
Duron B Grade	3040	10 B/H	4 Pit		
Flake Tech	3050	4 Pit	10 B/H		738,500
Flake Tech	3050	4 Pit	58 HCC-W/H		
Flake Tech	3050	4 Pit	78 Pachuta		
Flake Tech	3050	4 Pit	86 Odom		608
Flake Tech	3050	10 B/H	4 Pit		4,500
Flake Tech	3050	10 B/H	86 Odom		68,000
Flake Tech	3050	10 B/H	58 HCC-W/H		
Flake Tech	3050	10 B/H	78 Pachuta		
Flake Tech	3050	86 Odom	4 Pit		
Flake Tech	3050	86 Odom	10 B/H		
Flake Tech	3050	86 Odom	78 Odom-Pachuta		
Flake Tech 25KG	3060	88 Odom	4 Pit		
Flake Tech 25KG	3060	88 Odom	78 Odom-Pachuta		
Flake Tech 25KG	3060	4 Pit	88 Odom	237	13,059
Wham 2x2.5	3180	10 B/H	4 Pit		
Wham 2x2.5	3180	10 B/H	86 Odom Ind		
Wham 2x2.5	3180	86 Odom Ind	4 Pit		
Wham 2x2.5	3180	86 Odom Ind	10 B/H		
3# 20L	3220	25 Platte	4 Pit		
3# 20L	3220	4 Pit	25 Platte		
Wham 30	3240	4 Pit	86 Odom		
Wham 30	3240	4 Pit	10 B/H		
Wham 30	3240	10 B/H	59 Rice Farmers		
Wham 30	3240	10 B/H	86 Odom	61	1,830
Wham 30	3240	10 B/H	88 American Rice		
Wham 30	3240	59 Rice Farmers	10 B/H		
Wham 30	3240	78 Odom Pachuta	86 Odom Ind	243	7,290
Wham 30	3240	86 Odom Ind	4 Pit		
Wham 30	3240	88 Odom Ind	10 B/H		
Wham 30	3240	88 Odom Ind	59 Rice Farmers		
Wham 30	3240	88 Odom Ind	78 Odom-Pachuta	119	3,570
Wham 30	3240	88 Odom Ind	88 Amer Rice		
Wham 30	3240	88 Amer Rice	10 B/H		
Wham 5	3260	4 Pit	88 Odom		
Wham 5	3260	10 B/H	4 Pit		
Wham 5	3260	10 B/H	86 Odom Ind		
Wham 5	3260	88 Odom Ind	88 American Rice		
Wham 5	3260	86 Odom Ind	10 B/H		
Wham 5	3260	88 Odom Ind	4 Pit		
Wham 5	3260	88 American Rice	10 B/H		

Transfers Cont'd:	Item No	From	To	Cases/Drums	Gats/Lbs
4# 35's	3340	4 Pit	10 B/H		
4# 35's	3340	4 Pit	15 American		
4# 35's	3340	4 Pit	59 Rice Farmers		
4# 35's	3340	10 B/H	4 Pit		
4# 35's	3340	10 B/H	15 American		
4# 35's	3340	15 American	4 Pit		
4# 35's	3340	59 Rice Farmers	4 Pit		
4# 35's	3340	59 Rice Farmers	10 B/H		
4# 35's	3340	88 American Rice C	4 Pit		
Super Wham 30	3350	4 Pit	10 B/H		
Super Wham 30	3350	10 B/H	15 Amer Whse		
Super Wham 30	3350	10 B/H	59 Rice Farmers		
Super Wham 30	3350	10 B/H	86 Odom	7	210
Super Wham 30	3350	10 B/H	78 Odom-Pachuta		
Super Wham 30	3350	15 Amer Whse	86 Odom		
Super Wham 30	3350	15 Amer Whse	10 B/H		
Super Wham 30	3350	59 Rice Farmers	10 B/H		
Super Wham 30	3350	78 Odom Pachuta	86 Odom	172	5,160
Super Wham 30	3350	78 Odom Pachuta	10 B/H		
Super Wham 30	3350	86 Odom Ind	4 Pit		
Super Wham 30	3350	86 Odom Ind	10 B/H	240	7,200
Super Wham 30	3350	86 Odom Ind	15 Amer Whse		
Super Wham 30	3350	86 Odom Ind	59 Rice Farmers		
Super Wham 2x2.5	3360	4 Pit	10 B/H		
Super Wham 2x2.5	3360	4 Pit	86 Odom Ind		
Super Wham 2x2.5	3360	10 B/H	4 Pit		
Super Wham 2x2.5	3360	10 B/H	86 Odom Ind	38	180
Super Wham 2x2.5	3360	78 Odom-Pachuta	86 Odom Ind		
Super Wham 2x2.5	3360	86 Odom Ind	4 Pit		
Super Wham 2x2.5	3360	86 Odom Ind	10 B/H		
Super Wham 2x2.5	3360	86 Odom Ind	78 Pachuta		
Stam 35	3420	4 Pit	10 B/H	6,645	232,575
Stam 35	3420	10 B/H	4 Pit		
Duet 30	3430	10 B/H	86 Odom-Waynesboro	9	270
Duet 30	3430	86 Odom Ind	10 B/H		
Duet 30	3430	10 B/H	78 Pachuta		
Duet 30	3430	78 Odom-Pachuta	10 B/H		
Duet 30	3430	86 Odom Ind	78 Pachuta		
Butox 200 Bulk	15200	97 In Transit	57 HCC Cordete		
Butox 175 2x2.5	15240	10 B/H	57 HCC Cordete		
Butox 175 2x2.5	15240	11 Cascio	10 B/H		
Butox 175 2x2.5	15240	20 Gray-Albany	21 Gray-Ashburn		
Butox 175 2x2.5	15240	20 Gray-Albany	57 HCC Cordete		
Butox 175 2x2.5	15240	21 Gray-Ashburn	10 B/H		
Butox 175 2x2.5	15240	21 Gray-Ashburn	20 Gray-Albany		
Butox 175 2x2.5	15240	21 Gray-Ashburn	57 HCC Cordete		
Butox 175 2x2.5	15240	21 Gray-Ashburn	30 AWS		
Butox 175 2x2.5	15240	57 HCC-Cordete	10 B/H		
Butox 175 2x2.5	15240	57 HCC-Cordete	11 Cascio		
Butox 175 2x2.5	15240	57 HCC-Cordete	20 Gray-Albany		
Butox 175 2x2.5	15240	57 HCC-Cordete	21 Gray-Ashburn		
Butox 175 2x2.5	15240	57 HCC-Cordete	30 AWS		
Butox 175 4x1	15260	10 B/H	4 Pit		
Butox 175 4x1	15260	10 B/H	21 Gray-Ashburn		
Butox 175 4x1	15260	10 B/H	57 HCC Cordete		
Butox 175 4x1	15260	20 Gray-Albany	10 B/H		
Butox 175 4x1	15260	20 Gray-Albany	21 Gray-Ashburn		
Butox 175 4x1	15260	20 Gray-Albany	30 AWS		
Butox 175 4x1	15260	20 Gray-Albany	57 HCC Cordete		
Butox 175 4x1	15260	21 Gray-Ashburn	10 B/H		
Butox 175 4x1	15260	21 Gray-Ashburn	11 Cascio		
Butox 175 4x1	15260	21 Gray-Ashburn	20 Gray-Albany		
Butox 175 4x1	15260	21 Gray-Ashburn	30 AWS		
Butox 175 4x1	15260	21 Gray-Ashburn	57 HCC Cordete		
Butox 175 4x1	15260	30 AWS	20 Gray-Albany		
Butox 175 4x1	15260	57 HCC-Cordete	10 B/H		
Butox 175 4x1	15260	57 HCC-Cordete	11 Cascio		
Butox 175 4x1	15260	57 HCC-Cordete	20 Gray-Albany		
Butox 175 4x1	15260	57 HCC-Cordete	21 Gray-Ashburn		

Transfers Conf'd:	Item No	From	To	Cases/Drums	Gals/Lbs
Butax 175 4x1	15260	57 HCC-Cordela	30 AWS		
Butax 200 2x2.5	15540	10 B/H	11 Cascio		
Butax 200 2x2.5	15540	10 B/H	15 American		
Butax 200 2x2.5	15540	10 B/H	35 Robertson		
Butax 200 2x2.5	15540	10 B/H	57 HCC-Cordela		
Butax 200 2x2.5	15540	11 Cascio	10 B/H		
Butax 200 2x2.5	15540	11 Cascio	30 AWS		
Butax 200 2x2.5	15540	11 Cascio	57 HCC-Cordela		
Butax 200 2x2.5	15540	15 American	57 HCC		
Butax 200 2x2.5	15540	15 American	35 Robertson		
Butax 200 2x2.5	15340	20 Gray-Albany	4 Pit		
Butax 200 2x2.5	15540	20 Gray-Albany	15 American		
Butax 200 2x2.5	15540	20 Gray-Albany	35 Robertson		
Butax 200 2x2.5	15540	20 Gray-Albany	57 HCC Cordela		
Butax 200 2x2.5	15540	21 Gray-Ashburn	15 American		
Butax 200 2x2.5	15540	21 Gray-Ashburn	30 AWS		
Butax 200 2x2.5	15540	21 Gray-Ashburn	35 Robertson		
Butax 200 2x2.5	15540	21 Gray-Ashburn	15 American		
Butax 200 2x2.5	15540	30 AWS	15 American		
Butax 200 2x2.5	15540	30 AWS	35 Robertson		
Butax 200 2x2.5	15540	35 Robertson	15 American		
Butax 200 2x2.5	15540	57 HCC-Cordela	10 B/H		
Butax 200 2x2.5	15540	57 HCC-Cordela	15 American		
Butax 200 2x2.5	15540	57 HCC-Cordela	20 Gray-Albany		
Butax 200 2x2.5	15540	57 HCC-Cordela	21 Gray-Ashburn		
Butax 200 2x2.5	15540	57 HCC-Cordela	30 AWS		
Butax 200 2x2.5	15540	57 HCC-Cordela	35 Robertson		
Butax 200 4x1	15560	10 B/H	11 Cascio		
Butax 200 4x1	15560	11 Cascio	10 B/H		
Butax 200 4x1	15560	11 Cascio	35 Robertson		
Butax 200 4x1	15560	15 Amer Whse	35 Robertson		
Butax 200 4x1	15560	20 Gray-Albany	30 AWS		
Butax 200 4x1	15560	20 Gray-Albany	35 Robertson		
Butax 200 4x1	15560	21 Gray-Ashburn	30 AWS		
Butax 200 4x1	15560	57 HCC-Cordela	20 Gray-Albany		
Butax 200 4x1	15560	57 HCC-Cordela	21 Gray-Ashburn		
Butax 200 4x1	15560	57 HCC-Cordela	35 Robertson		
Butax 7500 DF 10x2.32	15580	4 Pit	10 B/H		
Butax 7500 DF 10x2.33	15580	4 Pit	15 American		
Butax 7500 DF 10x2.33	15580	10 B/H	15 American	320	7,456
Butax 7500 DF 10x2.33	15580	15 American	10 B/H		
Butax 7500 DF 10x2.33	15580	21 Gray-Ashburn	15 American		
Butax 7500 DF 10x2.33	15580	20 Gray-Albany	15 American		
Butax 7500 DF 10x2.33	15580	88 Odom	10 B/H		47,702
Butax 7500 DF 10x2.33	15580	88 Odom	21 Gray-Ashburn		
Butax 7500 DF Bulk	15690	86 Odom	4 pit		
Tromethamine Bulk	17000	4 Pit	31 Mantex		
Tromethamine Bulk	17000	31 Mentex	4 Pit		49,308
Tromethamine 25 Kg	17120	10 B/H	4 Pit		
Tromethamine 25 Kg	17120	4 Pit	31 Mentex	660	38,379
Tromethamine 25 Kg	17120	4 Pit	16 Antwerp		
Tromethamine 25 Kg	17120	31 Mentex	4 Pit		
Tromethamine 25 Kg	17120	31 Mentex	16 Antwerp		
Tris Ultra Pure 25 Kg	17270	4 Pit	16 Antwerp		
Tris Ultra Pure 25 Kg	17270	4 Pit	31 Mentex		
Tris Ultra Pure 25 Kg	17270	31 Mentex	4 pit		
DCPI	40150	4 Pit	52 Gulf States		
DCPI	40150	52 Gulf States	4 Pit		
DCPI	40150	97 In-Transit	52 Gulf States		
DCPI	40150	97 In-Transit	4 Pit		
ODCB	41000	97 In-Transit	4 Pit		
Hi Sil 233	41500	10 B/H	86 Odom-Waynesboro		
2,4 D-B Acid	41560	20 Gray-Albany	57 HCC-Cordela		
2,4 D-B Acid	41550	20 Gray-Albany	86 Odom-Waynesboro		
2,4 D-B Acid	41550	21 Gray-Ashburn	57 HCC-Cordela		
2,4 D-B Acid	41550	86 Odom	10 B/H		
Citric Acid	41590	57 HCC-Cordela	20 Gray-Albany		
Stepwet	41610	10 B/H	86 Odom-Waynesboro		
Corft Clay	41620	10 B/H	86 Odom-Waynesboro		

Transfers Cont'd:	Item No	From	To	Cases/Drums	Gals/Lbs
Ethephon	41680	4 Pit	86 Odom-Wayneboro		
Soprophor	41690	78 Pachuta	86 Odom-Wayneboro		
Molinate	41760	97 In-Transit	4 plant		178,372
Mt 30 gallon Drums	42100	78 Odom-Pachuta	86 Odom-Wayneboro		20
Mt 30 gallon Drums	42100	88 Odom	78 Odom-Pachuta		
Mt 30 gallon Drums	42100	88 Odom	4 pit		
Mt 30 gallon Drums	42100	10 B/H	78 Odom-Pachuta		
Mt 30 gallon Drums	42100	4 pit	86 Odom-Wayneboro		
Nitromethane	42680	10 B/H	4 Pit		
1 Gal jug mt	44100	20 Gray-Albany	57 HCC-Cordele		
1 Gal jug mt	44100	57 HCC-Cordele	20 Gray-Albany		
2.5 Gal jug mt	44200	57 HCC-Cordele	78 Odom-Pachuta		
2.5 Gal jug mt	44200	57 HCC-Cordele	20 Gray-Albany		
2.5 Gal jug mt	44200	78 Odom-Pachuta	86 Odom-Wayneboro		
2.5 Gal jug mt	44200	88 Odom	78 Odom-Pachuta		
Arquar 2C75	45120	88 Odom	78 Odom-Pachuta		
Irgalite Blue Dye	45130	88 Odom	78 Odom-Pachuta		
55 Gal Mt	45150	88 Odom	78 Odom-Pachuta		
Butachlor	45200	86 Odom	78 Odom-Pachuta		

Raw Materials Received:	Item No	Lbs	Cordele/Gray	Item No	Gals/Lbs
DCA	3020				
Flake Tech	3050				
P Acid	40200	633,380	60 % DMA	41580	24,200
P Anhy	40300	179,280	Citric Acid	41590	
M O.	40400	-141,860	2,4 D-B Acid	41550	Albany
Isoph/Mibk	41080	1,038,660	Jugs-1 gal plastic	44100	
Isoph	40500		Jugs-2.5 gal Plast	44200	
Emul	40600	265,560			
Aromatic B	40800	181,880	Odom-Wayneboro		
Armul	40900		Carbyl Tech	41670	
Mibk	41300		Stepperse	41600	
Ethephon	41680		Glycerine	41480	
MCPA-IOE	40930		Alfomo	41480	
55 Crystal Litho	42550		HiSil	41500	
55 mt's Black	42300		Poly O	41470	
35 mt's Plastic	42220	7,200	Morwet	41460	
35 mt's Plastic	42230		30 mt's	42100	
30 mt's Plastic	42100	2,477	2.5 gal jugs	44200	
Emul (Vico)	40810	73,540	Citric Acid	41590	
50L mt's			Veegum	41570	
ODCB	41000	1,645,150	Continental Clay	41620	
Sulfuric Acid	41010	1,488,540	Keizan	41510	
Nitric Acid	41020	855,940	DC Antifoam	45140	880
Soda Ash	41050	5,400	Arquar	45100	
Lime	41080	60,000	Arquar 2C75	45120	
Caustic 50%	41530		Irgalite	45130	
50% Rayon Caus	45090	44,420	Soprophor 4D38	41690	
Cleaning Solution		948	Mt 30's Fibre		
Ethephon	41680		Stepwet	41610	
Platinum	41040 (In Transit)		Proxel	41730	
Catalyst	41070	772	Butachlor	45200	
Peroxide	41090	23,000	Ucarcide	41750	
Hydrogen	41030	74,784	Odom-Pachuta		
Methanol	42640		2,4 D-B Acid	41550	
mt 55's			Mt 30's	42100	
TEPA			Transit-N O.		
Ferrous Sulfate			Odom-Pachuta Cont'd		
15 gal Mt's			Elhephon	41680	
Sun Oil	41640		Gray Dist		
Morpholine	41630		2,4 D-B Acid	41550	In Transit
55 gal Plastic			2,4 D-B Acid	41550	Albany
5 mt's	42000		DCPI	40150	
30 mt's			TA		
20 L mt's	42000 Plast		50% Caustic	45090	
2.5 mt's	44200		Nitromethane	42680	
			Formaldehyde	41540	
			Methanol	42640	
			Raney Nickel	42690	
			Sulfuric Acid	41010	

Raw Materials Received Cont'd:	Item No	Lbs		Rem No	Gals/Lbs
Dikuron:			Sodium Bisulfide		
Heptane	41660		DMA	42700	
Sulfuric Acid	41520		Calcium Chloride		
Anhydrous DMA	41650		Caustic 50%	41530	
			Sulfuric Acid	41520	
FMG 5-Nitro:			BlackHawk:		
Step 3	90800		Nitromethane	42680	
Step 4	90810		2.5 Mt pgs	44200	
Step 5	90820		Mt 30's	42100	
Calcium Chloride	90830				
Chlorine	90720				
A Sulfate	90710				
G Acid	90700				
50% Caustic	45090		Acifluorfen:		
20% Oleum	90770		50% Caustic	41530	222,900
Methanol	90790		Mixed Nitrating Ac	41700	
Soda Ash	90740		Acetic Anhydride	41710	
Toluene	90760		98 % Sulfuric Acid	41010	
93% Sulfuric Acid	90750		Nitric Acid	41020	
Mixed Acid	90730		Acifluorfen Cont'd:		
Spent Acid			Ethylene Dichloride	41720	
			Calcium Chloride		
			R118118	90200	402,920
			Pertone D	41740	
Dover Phos:			Stanol:		
TPP	90910		N-Propanol	90320	
PE	90950		Sterol	97100	
DCP	90920		Catalyst	97110	
Xylene	90940		Cyclohexane	97120	
Methanol	90930				
Caustic	90970		Pentabrom:		
			50% Caustic	45090	44,680
			Bromine	91010	76,740

Adjustments to Inventory (Per physical; samples; etc.):

Product	Item No	Location	Type Adj	Cases/Drums	Gals/Lbs				
Propanil Tech	3000	4 Plant	Adj-Inv			S	1054	1440	S 702 1420
DCA	3020	97 In Transit	Adj-Inv			C	3053	5100	S 701 1420
DCA	3020	100 EMV-No Hungarian	Adj-Inv			C	3053	5100	S 701 1420
Flaked Tech	3050	4 Plant	Adj-Inv			C	3055	5100	S 804 1420
Flaked Tech	3050	10 B/H	Adj-Inv			C	3055	5100	S 804 1420
Flaked Tech	3050	78 Odorn-Pachuta	Adj-Inv			C	184	6835	S 804 1420
Flaked Tech	3050	88 Odorn	Adj-Inv			C	184	6835	S 804 1420
Flaked Tech 25 Kg	3060	4 Plant	Adj-Inv			C	855	7700	S 822 1420
Flaked Tech 25 Kg	3060	78 Odorn-Pachuta	Adj-Inv			C	155	6740	S 822 1420
Flaked Tech 25 Kg	3060	86 Odorn	Adj-Inv			C	3055	5100	S 822 1420
Dikuron Std Grade	3030	4 Plant	Adj-Inv			C	3057	5100	S 816 1420
Dikuron Std Grade	3030	10 B/H	Adj-Inv			C	3057	5100	S 816 1420
Dikuron Std Grade	3030	97 In Transit	Adj-Inv To Quantity Shipped to Customer			C	3057	5100	S 816 1420
Dikuron B Grade	3040	4 Plant	Adj-Inv		63,600	C	3057	5100	S 844 1420
Wham 2x2.5	3180	10 B/H	Adj to Physical			C	3064	5100	S 832 1420
Wham 2x2.5	3180	86 Odorn	Adj to Physical			C	184	6740	S 832 1420
3# 55's	3210	4 plant	demo			C	3087	5100	S 808 1420
3# 20 L	3220	25 Plant	Leaker			C	3067	5100	S 819 1420
Wham 30's	3240	10 B/H	Adj-Inv	(1)	(30)	C	184	6740	S 805 1420
Wham 30's	3240	78 Odorn-Pachuta	Adj-Inv			C	184	6740	S 805 1420
3# Propanil 200L	3250	4 Plant	Label Change			C	3087	5100	S 807 1420
Wham 5	3260	4 Plant	Adj-Inv			C	3084	5100	S 808 1420
Wham 5	3260	10 B/H	Adj-Inv			C	184	6740	S 808 1420
Wham 5	3260	88 Odorn	Adj-Inv			C	184	6740	S 808 1420
4# Bulk	3300	4 Plant	Adj-Inv			C	3069	5100	S 817 1420
4# 35	3340	4 Plant	Donation			C	3069	5100	S 814 1420
4# 35	3340	15 American	Adj-Inv			C	3069	5100	S 814 1420
4# 55's	3310	4 Plant	Label Change			C	3069	5100	S 818 1420
4# 210L	3320	4 Plant	Adj-Inv			C	3069	5100	S 838 1420
Super Wham 30 g	3350	15 American	Adj-Inv			C	3084	5100	S 831 1420
Super Wham 30 g	3350	78 Odorn-Pachuta	Adj-Inv			C	184	6740	S 831 1420
Super Wham 30 g	3350	88 Odorn	Adj-Inv			C	3084	5100	S 831 1420
Super Wham 2x2.5	3360	10 B/H	Adj-Inv			C	3084	5100	S 834 1420

Adjustments to Inventory (Per physical; samples; etc.):

Product	Item No	Location	Type Adj	Cases/Drums	Gals/Lbs					
Prop Tech	3000	4 Plant	Melted F Tech			C	155	6810	S	702 1420
Flake Tech	3050	4 Plant	Melted F Tech			S	804	1420	C	155 6740
Flake Tech	3050	86 Odom-Waynesboro	Adj to Physical			C	164	6835	S	804 1420
Flaked Tech 25 Kg	3060	86 Odom-Waynesboro	Adj to Physical			C	3053	5100	S	822 1420
Wham 2x2 5	3180	10 B/H	Adj to Physical			C	3064	5100	S	832 1420
Wham 30	3240	10 B/H	Samples			C	964	7700	S	805 1420
Wham 30	3240	86 Odom-Waynesboro	Rework Adjustment	(1,026)	(30,780)	C	964	7700	S	808 1420
Prop 4# 210 L	3320	4 Plant	Adj-Inv			C	3069	5100	S	836 1420
4# 35's	3340	4 Plant	Adj-Inv			C	3069	5100	S	814 1420
4# 35's	3340	10 B/H	Adj-Inv			C	3069	5100	S	814 1420
Super Wham 30	3350	10 B/H	Adj to Physical			C	164	6740	S	831 1420
Super Wham 2x2 5	3360	86 Odom-Waynesboro	Adj-Inv			C	964	7700	S	834 1420
Super Wham 2x2.5	3360	10 B/H	Adj-Inv			C	3064	5100	S	834 1420
Super Wham 2x2.5	3360	86 Odom	Adj-Inv			C	164	6740	S	834 1420
Super Wham Bulk	3370	86 Odom	Adj-Inv			C	164	6740	S	856 1420
Duet 30's	3430	10 B/H	Adj-Inv			C	159	6740	S	823 1420
Duet 30's	3430	78 Odom-Pachuta	Adj-Inv			C	159	6740	S	823 1420
Duet 30's	3430	86 Odom-Waynesboro	Adj-Inv			C	159	6740	S	823 1420
Propanil 360 210L	10020	4 Plant	Repackage			C	3067	5100	S	826 1420
Butox 175 2x2.5	15240	57 HCC-Cordata	Inv Adj			C	410	5100	S	410 1420
Butox 175 2x2.5	15240	10 B/H	Inv Adj			C	410	5100	S	410 1420
Butox 175 2x2.5	15240	20 Gray-Albany	Inv Adj			C	410	5100	S	410 1420
Butox 175 4x1	15260	10 B/H	Inv Adj			C	410	5100	S	410 1420
Butox 175 4x2	15261	12 Casco	Samples			C	410	7700	S	411 1421
Butox 175 4x1	15260	20 Gray-Albany	Inv Adj			C	410	5100	S	410 1420
Butox 200 2x2.5	15540	10 B/H	For Samples			C	430	7700	S	850 1420
Butox 200 2x2.5	15540	57 HCC-Cordata	Inv Adj			C	430	5100	S	430 1420
Butox 200 2x2 5	15540	20 Gray-Albany	Inv Adj			C	430	5100	S	430 1420
Butox 200 2x2.5	15540	15 American	Inv Adj			C	430	5100	S	430 1420
Butox 200 4x1	15560	57 HCC-Cordata	Inv Adj			C	430	5100	S	430 1420
Butox 7500 DF 10x2 33	15580	20 Gray-Albany	Inv Adj			C	420	5100	S	850 1420
Butox 7500 DF 10x2 33	15580	10 B/H	Samples			C	420	7700	S	850 1420
Butox 7500 DF 10x2.33	15580	31 AWS	Samples	(1)	(23)	C	420	7700	S	850 1420
Ethephon	15740	21 Gray-Ashburn	Set Up Finish Goods			C	187	6740	S	851 1420
Ethephon	15740	78 Odom-Pachuta	Set Up Finish Goods							
Tromethemine Bulk	17000	4 Plant	Adj-Inv			C	3683	5100	S	849 1420
Tromethemine Bulk	17000	31 Meritex	Adj-Inv			C	3683	5100	S	849 1420
Tromethemine 25 Kg	17120	4 Plant	Adj-Inv			C	3683	5100	S	843 1420
Tromethemine 25 Kg	17120	31 Meritex	Samples			C	3683	5100	S	843 1420
Trometamol 50 Kg	17240	4 Plant	Adj-Inv			C	3683	5100	S	847 1420
Tris Ultra Pure 100Kg	17250	4 Plant	Adj-Inv			C	3683	5100	S	853 1420
Pure Tris-Hcl 100Kg	17260	4 Plant	Adj-Inv			C	3683	5100	S	855 1420
Tris Ultra Pure 25Kg	17270	4 Plant	Adj-Inv			C	3683	5100	S	859 1420
Tris Ultra Pure 25Kg	17270	31 Meritex	Adj-Inv			C	163	6740	S	859 1420
TA Mother Liquor	17300	4 Plant	Adj-Inv							
TA Hcl Mother Liquor	17310	4 Plant	Adj-Inv							
TA Chunks	17320	4 Plant	Adj-Inv							
Ultra Pure Samples	17340	4 Plant	Adj-Inv							
DCPI	40150	97 In Transit	Adj to Physical			C	157	5635	S	715 1460
Isophorone	40500	86 Waynesboro	Adj-Inv			C	151	6400	S	717 1460
Isophorone	40500	78 Pachuta	Adj-Inv			C	151	6400	S	717 1460
Dowfax	40700	86 Odom-Waynesboro	Adj to Physical			C	164	5850	S	753 1460
Arnul Emulsifier	40900	78 Odom-Pachuta	Adj to Physical			C	168	5675	S	720 1460
Arnul Emulsifier	40900	86 Waynesboro	Adj to Physical			C	151	6400	S	720 1460
TM-2 Emulsifier	40910	4 Plant	Adj to Physical			C	151	6400	S	722 1460
Poly Solv	40920	4 Plant	Adj to Physical			C	151	6400	S	723 1460
Soda Ash	41050	4 Plant	Sold			C	151	6400	S	708 1460
Morwet	41460	86 Odom-Waynesboro	Adj to Physical			C	164	5850	S	728 1460
Polyfon O	41470	86 Odom-Waynesboro	Adj to Physical			C	164	5850	S	727 1460
Glycerne	41480	86 Odom-Waynesboro	Adj to Physical			C	164	5850	S	728 1460
Alfonic	41490	86 Odom-Waynesboro	Adj to Physical			C	164	5850	S	729 1460
H58 233	41500	10 B/H	Adj to Physical			C	164	5850	S	737 1460
Kelzan	41510	86 Odom-Waynesboro	Adj to Physical			C	164	5850	S	761 1460
Sulfuric Acid	41520	4 Plant	Activaten used this raw material			C	182	5850	S	762 1460
50% Caustic	41530	4 Plant	Entered under wrong item #			C	151	6400	S	763 1460
Formaldehyde	41540	4 Plant	Used out of Vinnings Stock			S	8900	1230	S	764 1460
2,4 D-B Acid	41550	86 Odom-Waynesboro	Adj to Physical			C	410	7700	S	765 1460

Adjustments to Inventory (Per physical; samples; etc.):

Product	Item No	Location	Type Adj	Cases/Drums	Gals/Lbs				
Veegum	41570	88 Odom-Waynesboro	Adj to Physical		C 164 5850		S 731 1460		
60% DMA	41580	57 HCC-Cordata	Adj to Physical		C 410 5700		S 766 1460		
Citric Acid	41590	88 Odom-Waynesboro	Adj to Physical		C 164 5850		S 787 1460		
Citric Acid	41590	57 HCC-Cordata	Adj to Physical		C 164 5850		S 787 1460		
Stapaperse	41600	88 Odom-Waynesboro	PO written under wrong item #		C 164 5850		S 740 1460		
Stapwet	41610	10 B/H	PO written under wrong item #		C 164 5850		S 743 1460		
Contri Clay	41620	10 B/H	Adj to Physical		C 164 5850		S 748 1460		
Morpholine	41630	4 Plant	Adj-Water Treatment		C 151 6400		S 768 1460		
Carbaryl Tech	41670	88 Odom-Waynesboro	Adj to Physical		C 164 5850		S 757 1460		
Ethephon	41680	21 Gray-Ashburn	Set Up Finish Good				S 791 1460		
Ethephon	41680	78 Odom-Pachuta	Set Up Finish Good		C 187 5910		S 791 1460		
Ethephon	41680	88 Odom-Waynesboro	Adj-Inv		C 196 6710		S 791 1460		
Soprophor	41690	88 Odom-Waynesboro	Adj-Inv		C 164 5850		S 809 1460		
Ucarvide	41750	88 Odom-Waynesboro	Adj-Inv		C 184 5850		S 827 1460		
Drums 30 plastic	42100	88 Odom-Waynesboro	Adj to Physical		C 184 5870	(1)	S 762 1460	15 85	(15 85)
Drums 30 plastic	42100	4 Plant	Adj - Used for labeling practice		C 164 5870		S 762 1460		
Drums 30 plastic	42100	78 Odom-Pachuta	Adj to Physical		C 164 5870	20	S 752 1460	(317 00)	317 00
Drums 30 plastic	42100	10 B/H	Adj to Physical		C 164 5870		S 762 1460		
35 ml's	42210	4 Plant	Adj-Inv		C 1069 5890		S 738 1460		
55 ml black	42300	78 Odom-Pachuta	Adj to Physical		C 1068 5890		S 742 1460		
55 ml Crystal	42560	4 Plant	Adj-Inv		S 4 1230		S 756 1460		
Methanol	42640	4 Plant	Clean Out Tank		C 198 6400		S 735 1460		
Hcl	42670	4 Plant	Adj-Inv		C 151 6400		S 758 1460		
Nitromethane	42680	4 Plant	Adj-Inv		C 183 5850		S 787 1460		
Raney Nickel	42690	4 Plant	Adj-Inv		C 183 5850		S 788 1460		
Sodium Hypo	42610	4 Plant	Sent to Ponds		C 151 6400		S 789 1460		
Hydroxamine Sulfate	42650	4 Plant	Adj to Physical		C 151 6400		S 738 1460		
Jugs 1	44100	20 Gray-Albany	Adj-Inv		C 410 5870	7,017	S 749 1460		3,017 31
Jugs 1	44100	57 HCC-Cordata	Adj-Inv		C 410 5870	(8,387)	S 749 1460		(3,606 41)
Jugs 2.5	44200	20 Gray-Albany	Adj-Inv		C 410 5870	(183)	S 759 1460		(248 88)
Jugs 2.5	44200	57 HCC-Cordata	Shipped per Stanley		C 410 5870	7,357	S 759 1460	(10,005 52)	10,005.52
Jugs 2.5	44200	88 Odom-Waynesboro	Adj to Physical		C 164 5870		S 759 1460		
Jugs 2.5	44200	78 Odom-Pachuta	Adj to Physical		C 164 5870		S 759 1460		
Antifoam AF 1500	45000	4 Plant	Transfer to Vinning Stock		S 8900 1230		S 770 1460		
DMPA	45020	4 Plant	Transfer to Vinning Stock		S 8900 1230		S 772 1460		
GMS	45030	4 Plant	Used out of Vinnings Stock		S 8900 1230		S 773 1460		
Metacure T-1	45040	4 Plant	Transfer to Cedar Stock		S 8900 1230		S 774 1460		
20% Rayon Caustic	45080	4 Plant	Transfer to Cedar Stock		S 8900 1230		S 779 1460		
50% Rayon Caustic	45090	4 Plant	Entered under wrong item #		C 151 6400		S 792 1460		
50% Rayon Caustic	45090	4 Plant	Adj to Physical		C 151 6400		S 792 1460		
Arquad	45100	88 Odom-Waynesboro	Adj to Physical		C 158 5850		S 781 1460		
Arquar	45120	88 Odom-Waynesboro	Adj to Physical		C 158 5850		S 783 1460		
Irgalite Blue	45130	88 Odom-Waynesboro	Adj to Physical		C 158 5850		S 784 1460		
DC 1500 Antifoam	45140	88 Odom-Waynesboro	Samples		C 164 5850		S 785 1460		
55 ml	45150	88 Odom-Waynesboro	Adj to Physical		C 1068 5890		S 786 1460		
55 ml	45150	78 Odom-Pachuta	Adj to Physical		C 151 6400		S 786 1460		
Butachlor	45200	88 Odom-Waynesboro	Adj to Physical		C 151 6400		S 794 1460		
Butachlor	45200	78 Odom-Pachuta	Adj to Physical		C 151 6400		S 794 1460		
Cans 5 gal ml's	42000	4 Plant	Adj to Physical		C 151 6400		S 739 1460		

Misc Activity:				Lbs/Gls				
Platinum Purchased:								
Platinum	41040	97 In-Transit	Purchased					
Platinum	41040	97 In-Transit	Used		160			
					64			
DCPI Purchased:								
DCPI	40150	97 In-Transit	Purchased R-P			S	715	1480
ODCB	41000	97 In-Transit	Used R-P			S	2	1590
								S 2 1590
								S 703 1460
Diuron Purchased:								
Diuron	3030	97 In-Transit	Purchased EMV			C	157	5910
Diuron	3030	97 In-Transit	Transfer to Inventory			S	816	1420
DCA	3020	97 In-Transit	Used EMV			S	3	1590
								S 3 1590
								C 157 6740
								S 701 1420
DCA Purchased:								
DCA	3020	97 In-Transit	Purchased Beesterfeld			C	153	5910
DCA	3020	97 In-Transit	Purchased Rhona-Poulenc			C	153	6910
DCA	3020	97 In-Transit	Transfer to Inventory			S	701	1420
ODCB	41000	97 In-Transit	Used R-P			S	4	1590
								S 4 1590
								S 703 1480
ODCB Purchased	41000	97 In Transit						
Mollinate Tech Purchased	41760	97 In-Transit	Purchased EMV		227,404			

CEDAR - WEST HELENA
Production & Sales Units

Item No	CC		Prod No	Jim Rone		Prod No	Year-To-Date Contracts	P Fields		Prod No	Year-To-Date Contracts
	C McGee B. Christian			File Copy				SOLD			
12/31/1999	PRODUCE			Drums							
	Drums	lbs/lbs		Drums	lbs/lbs						
CYMP	5110		73			590	30,196				
Acfluorfen 100% AI	5120	140,626	86		140,626	583	1,822,620				
BFG	5250		74			578	4,908,320				
DoverPhos	5150		72			589	109,030				
FMC 5-Nitro	5290		70			580	106,241				
Pentabrom	5160	42,506	77		42,506	587	42,506				
Stanol	5350	25,568	83		25,568	585	58,560				
TA	17000		87					C 3683	5100	51,106 50	S 837 1420
TA 25 Kg	17020										S 842 1420
Pure Tromethamine 25Kg	17120	353 19,457		246	13,560						S 843 1420
Pure Tromethamine 50Kg	17230										S 846 1420
Tromethamine Total					13,560	586					
Trometamol 25 Kg	17220							C 3681	5100	2,483 00	S 845 1420
Trometamol 50 Kg	17240										S 847 1420
Tns Ultra Pure 100 Kg	17250										S 853 1420
Pure Tris Hcl 100 Kg	17260										
Tns Ultra Pure 25Kg	17270	682 37,592		12	681						S 859 1420
Trometamol Total			85		681	581					(2,493.00)
P Tech	3000	2,022,458	20			554		C 3054	5100		S 702 1420
DCA	3020	1,499,253	10		11,000	553		C 3053	5100	11,220 00	S 701 1420
Diuron	3030				47,536			C 3057	5100	132,150 08	S 816 1420
Diuron B Grade	3040										S 844 1420
Total Diuron			11		47,536	557					
Flack Tech 25 Kg	3060	435 23,869		1,120	61,712			C 3055	5100	1,173,585.00	S 822 1420
Flaked Tech	3050	804,000	21		1,042,500						S 804 1420
Total Flake Tech					1,104,212	555					(1,094,625 00)
3# 210L	10020							C 3067	5100		S 826 1420
3# bulk	3200	2,784	23								S 802 1420
3# 50 L	3190										S 854 1420
3# 20L	3220										S 819 1420
3# 200L	3250	51 2,695									S 807 1420
3# 55	3210										S 806 1420
3# Total						567					
Wham 2 x2.5	3180							C 3064	5100		S 832 1420
Wham 5	3260										S 808 1420
Wham 100L	3230										S 828 1420
Wham 30	3240	(195) (5,880)									S 805 1420
Super Wham Bulk	3370										S 856 1420
Super Wham 2x2 5	3380	(38) (180)									S 834 1420
Super Wham 30	3350	207 8,210									S 831 1420
Wham Sub-Total		150	25			564					
Duet 30	3430							C 3059	5100		S 823 1420
Duet Total			59			559					
RiceSolo Bulk	3130	73,410	27					C 3068	5100	1,160,397.00	S 862 1420
RiceSolo 30	3080	2,447 73,410		2,445	73,350						(1,160,397 00)
RiceSolo Total					73,350	568					
Stam bulk	3400	253,424	32								S 811 1420
Stam 35	3420	7,105 248,675		2,860	100,100			C 3072	5100	780,780 00	S 813 1420
Stam Total					100,100	572					(780,780 00)
4# bulk	3300	(5,392)	24					C 3069	5100	678,125 00	S 817 1420
4# 20 L	3290										S 812 1420
4# 55	3310										S 818 1420
4# 210 L	3320										S 836 1420
4# 200 L	3330										S 839 1420
4# 35	3340			2,500	87,500						S 814 1420
Prop 4# Domestic Sales					87,500	569					(678,125.00)
Butoxone 175 4r1	15260	(5) (20)						C 410	5100		S 410 1420
Butoxone 175 2x2.5	15240	(60) (300)									
175 Total		(65) (320)	51			591					
Butoxone 200 2x2 5	15540	(288) (1,440)		360	1,800			C 430	5100	22,104.00	S 430 1420
Butoxone 200 4r1	15560										(22,104.00)
200 Total		(1,440)	52		1,800	594					
Ethephon 100% AI	15740		90			595		C 3687	5100		S 851 1420
Butox 7500 10x2.33	15580			100	1,000	592		C 420	5100	13,650 00	S 850 1420
Butox 7500 Bulk	15590		53								(13,650 00)
KWH					1,457,410	101					
Total										4,025,610 58	(4,025,610 58)

Finish Goods Standards:

Product	Item No	Unit	Per Unit	
Propanil Tech Bulk	3000	lbs	1.01	
DCA-Cedar	3020	lbs	1.02	
Diuron	3030	lbs	2.78	
Diuron B Grade	3040	lbs	2.78	
Flaked Tech	3050	lbs	1.05	
Flaked Tech 25Kg	3060	kg	2.62	
Diuron Col 224 Kg	3070	kg	4.10	
RiceSolo 30 Gal	3080	gls	15.82	
55% Blend	3100	lbs	1.01	
RiceSolo Bulk	3130	gls	15.27	
Wham DF (80%) 40#	3150	lbs		1.70
WhamI EZ 2x2 5 Gal	3180	gls	7.38	
3# 50 Liter	3180	Lt	1.79	
Propanil 3# bulk	3200	gls	6.11	
Propanil 3# 55 gal	3210	gls	6.79	
Propanil 3# 20L	3220	Lt	1.79	
Wham 100 Liter	3230	Lt	1.95	
Wham 30 gal	3240	gls	7.38	
Propanil 3# 200L	3250	Lt	1.79	
Wham 5 gal	3260	gls	7.38	
Wham 80% 50#	3270	lbs		1.70
Propanil 4# 20L	3280	Lt	2.05	
Propanil 4# Bulk	3300	gls	6.89	
Propanil 4# 55 gal	3310	gls	7.75	
Propanil 4# 210 L	3320	Lt	2.05	
Propanil 4# 200L	3330	Lt	2.05	
Propanil 4# 35 gal	3340	gls	7.75	
Super WhamI 30 gal	3350	gls	7.38	
Super WhamI 2x2.5 Gal	3360	gls	7.38	
Super Wham Bulk	3370	gls	6.86	
Stam Bulk	3400	gls	7.31	
Stam 35 gal	3420	gls	7.80	
Duet	3430	gls	7.33	
Trisamine Alcohol	5340	lbs	3.77	
Propanil 360 210 L	10020	Lt	1.79	
Butox 200 Bulk	15200	gls	10.25	
Butox 175	15240/15260	gls	10.80	
Butox 200	5530/15540/1556	gls	12.28	
Butoxone 7500 DF	15580	Bag	13.65	
Butoxone 7500 DF	15590	Bulk	1.85	
Ethephon	15740	lbs	1.24	
Tromethamine Bulk	17000	lbs	3.77	
Tham 25 Kg	17020	kg	8.31	3.77 lb
Pure Tromethamine 25 Kg	17120	kg	8.31	3.77 lb
Tromethamol 25 Kg	17220	kg	18.50	8.39 lb
Pure Tromethamine 50 Kg	17230	kg	8.31	3.77 lb
Tromethamol 50 Kg	17240	kg	18.50	8.39 lb
Tris Ultra Pure 100 Kg	17250	kg	18.12	8.22 lb
Pure Tris-Hcl 100 Kg	17260	kg	18.12	8.22 lb
Tris Ultra Pure 25 Kg	17270	kg	23.04	10.45 lb

R/M's Standard:

Product	Item No	Unit	Per Unit
DCA	40100	lbs	1.05
DOP1	40150	lbs	2.38
P Acid	40200	lbs	24
P Anhydr	40300	lbs	82
MO	40400	lbs	59
Isophor	40500	lbs	56
Emul	40600	lbs	70
Emul C6173	40610	lbs	.70
Dowfax 3B2	40700	lbs	7.52
Tenn 500	40800	lbs	.15
Armud	40900	lbs	78
TM-2 Emulsifier	40910	lbs	1.65
PolySol	40920	lbs	.71
MCPA-IOE	40930	lbs	1.78
ODCB	41000	lbs	37

R/M's Standard	Item No	Unit	Per Unit
Sulfuric Acid	41010	lbs	.04
Nitric Acid	41020	lbs	.16
Hydrogen	41030	lbs	1.20
Platinum	41040	tr ozs	393.00
Soda Ash	41050	lbs	.13
Lime	41060	lbs	.07
Pist Cat	41070	lbs	68.00
Isoph/Mibk	41080	lbs	.52
Hydrogen Peroxide	41090	lbs	.23
Xylene (Cedar)	41200	lbs	.19
Mibk	41300	lbs	.47
Vangel	41450	lbs	1.37
Morewet	41460	lbs	1.08
Polyfan	41470	lbs	.62
Glycer	41480	lbs	.45
Aflonic	41490	lbs	.78
Hi Sil	41500	lbs	.83
Katzan	41510	lbs	5.30
Sulfuric Acid 83%	41520	lbs	.04
Caustic 50%	41530	lbs	.06
Formaldehyde	41540	lbs	.11
2,4 D-B Acid	41550	lbs	2.00
Carbon Bisulfide	41560	lbs	.26
Veegum	41570	lbs	1.65
60% DMA	41580	lbs	.60
Citric Acid	41590	lbs	.92
Step-sperse DF 200	41600	lbs	1.27
Stepwet DF 95	41610	lbs	2.48
Continental Clay	41620	lbs	.06
Morpholine	41630	lbs	1.06
Sun 7N Oil	41640	lbs	.16
Anhydrous DMA	41650	lbs	.64
High Ourity Heptane	41660	lbs	.21
Technical Carbonyl	41670	lbs	3.75
Ethephon	41680	lbs	3.37
Sorpropor 4d384	41690	lbs	1.87
Mixed Nitrating Acid	41700	lbs	.11
Acetic Anhydride	41710	lbs	.38
Ethylene Dichloride	41720	lbs	.22
Proxel GXL	41730	lbs	5.12
Perkone D	41740	lbs	.33
Ucarcide	41750	lbs	2.50
Mollinate	41760	lbs	2.80
5 gal/20 L Pts	42000	ea	3.95
30 Mts	42100	ea	15.85
Stam 35	42200	ea	17.80
35 mts	42210	ea	19.50
35 mts Plastic/Stam	42220	ea	15.00
35 mts Plastic/Prop	42230	ea	15.00
55 mts	42300	ea	22.05
55 mts Plastic	42500	ea	22.50
55 mts Crystal Litho	42550	ea	21.60
MTPO Drums	42600	ea	25.55
Sodium Hypo	42610	lbs	.08
Caustic 30%	42620	lbs	.07
Methal Mercaptan	42630	lbs	.78
Methanol 99%	42640	lbs	.07
Hydroxamine Sulfate	42650	lbs	1.00
Caustic 17%	42660	lbs	.03
Hydrochloric Acid	42670	lbs	.05
Nitromethane 99.5%	42680	lbs	1.38
Nickel Catalyst	42690	lbs	7.83
DMA 40% Solution	42700	lbs	.47
Unipacks	44000	ea	2.88
Jugs-1 Gal Plastic	44100	ea	.43
Jugs-2.5 Gal Plastic	44200	ea	1.38
Antifoam AF 9000	45000	lbs	9.60
Acetone	45010	lbs	.35

R/M's Standard Product	Item No	Unit	Per Unit
Dimethylolpropione	45020	lbs	2.83
Glycerol Monosterate	45030	lbs	.71
Metacure T-1 Catalyst	45040	lbs	12.28
Methyldiethanolamine	45050	lbs	2.15
Proxel GXL Biocide	45060	lbs	5.20
Toluene Diisocyanate	45070	lbs	1.33
20% Rayon Grade Caustic	45080	lbs	.11
50% Caustic	45090	lbs	.08 (Old Rayon Grade)
Arquad 18/29	45100	lbs	1.15
Arquar 2C75	45120	lbs	1.85
Irgalite Blue dye	45130	lbs	13.55
DC 1500 Antifoam	45140	lbs	6.30
Drum 55 gal Diuron Col	45150	ea	44.95
Butachlor	45200	lbs	2.35
Sodium Cyanide	45300	lbs	.90
TEAB	45310	lbs	3.90
Tenneco 500/100	45320	lbs	.18
36% Hcl	45330	lbs	.10
Toluene	45340	lbs	.15
Rock Salt	45350	lbs	.19
Thionyl Chloride	45360	lbs	0.70
DMF	45370	lbs	0.95
Granular Salt	45380	lbs	0.12
55 mt Drums (Cyper)	45390	lbs	29.50
2-4 DB Acid 95%	46000	kg	2.55
Metsulfuron Methyl 80%	46010	kg	118.50
Acido Propionico Puro	46020	kg	1.27
Acido Propionico Usado	46030	kg	1.27
Dicloroantina 98%	46040	kg	3.00
Propanil Tech	46050	kg	3.08
Criston 34	46060	kg	2.26
Criston 180	46070	kg	2.48
Acete Banano	46080	kg	0.11
Osido Mestilico	46090	kg	2.08
Tolueno	48100	kg	0.79
Anhydrous Hydr Chloride	48200	lbs	0.70
Ethylene Oxide	48210	lbs	0.42
Phosphorus Trichloride	48220	lbs	0.42

Aventis Cyclolide in Unit 5---2,4-DCA Whole Drum Charge
Heat & Mass Balance

Assumptions:

- | | |
|---|--|
| 1. Average Rate @ 65% Overall O.S.T. | 6. All Yield calculations based on DCA |
| 2. 0.5% Material Loss through centrifugation | 7. --- |
| 3. Centrifuge discharge @ 20% LOD | 8. --- |
| 4. Centrifugation Cycle=1.25 hours @ 300 lb./piow | 9. --- |
| 5. Vac. Dryer discharge at 0.5% LOD | 10. --- |

SUMMARY OF RESULTS

Instantaneous Rate	
Final Product (lb/day)	18,181.8
Final Product (M/day)	145.0
Average Rate @ 65% OAST	
Final Product (lb/day)	18,181.8
Final Product (M/day)	145.0
Final Product (M/day)	145.0

Stream No.		R-4 Charge	CPDM Charge	NaOCH3 Charge	MeOH Strip	Coupling Water Charge	Intermed Xferred to R-1	Hydroly's Water Charge	R-1 Hydr. Intermediate	MeOH Distilla'tn	Intermed. Xferred to R-3 (AQ)	Hydrol. Org. Phase to Rec'y
Component	MW											
Raw Materials												
CPDM	158.10		2,146.8									
2,4 DCA	162.02	2,200.0										
NaOCH3	54.02			670.8								
MeOH	32.00			1,585.1								
H2O	18.00					6,222.7	6,222.7	2,921.3	9,144.0		9,144.0	
NaOH	40.00											
Formic Acid	46.03											
Xylene	106.17	7,982.8			23.8		7,959.0		7,959.0			7,959.0
(By) Products												
Na-CPMPA	310.10						4,000.2					
MeOH	32.00				2,359.8				412.8	412.8		
Na-RPA 90946	296.10								3,628.6		3,628.6	
RPA 90946	274.10											
NaCHO2	68.01											
Others	---											
Stream Weight, lb/batch		10,182.8	2,146.8	2,235.9	2,383.6	6,222.7	18,181.8	2,921.3	21,144.4	412.8	12,772.6	7,959.0
Stream Volume, gal (ft3)		1,313.0	224.7	223.7	361.2	747.0	2,352.7	350.7	2,762.5	62.6	1,580.7	1,099.5
Temperature, °F		77.0	104.0	140.0	146.3	145.0	145.0	140.0	77.0	212.0	68.0	77.0
Pressure, psia (torr)		14.7	(180)	(180)	(180)	14.7	14.7	14.7	14.7	14.7	14.7	14.7
Density, g/cc (lb/ft3)		0.93	1.15	1.20	0.79	1.00	0.93	1.00	0.92	0.79	0.97	0.87
Viscosity, cP (cSt)												
Molar Yield (Overall)							95.0%		95.0%			
Vessel Nominal Volume, gal (ft3):		2,870.0	2,870.0	2,870.0			2,870.0		3,500.0		3,000.0	17,000.0
Vessel Filled Level (%):		46%	54%	61%			82%		78.9%		53%	6%

Heat & Mass Balance

Assumptions:

1. Average Rate @ 65% Overall O.S.T.
2. 0.5% Material Loss through centrifugation
3. Centrifuge discharge @ 20% LOD
4. Centrifugation Cycle=1.25 hours @ 300 lb./pt
5. Vac. Dryer discharge at 0.5% LOD

Stream No.												
Description		R-3 Acid Charge	Precipit'd Prod't to Centrif.	Centrif. Wash Water	M/L Disch. To T-5208	Centrif'd Mat'l to Holoftgt	Holoftgt Dryer Disch	Holoftgt Vent Disch	Wet Prod't to Dryer	Vac Dryer Vent Disch	Dried Final Product	Xylene to Recycle
Component	MW											
Raw Materials												
CPDM	158.10											
2,4 DCA	162.02											
NaOCH3	54.02											
MeOH	32.00											
H2O	18.00	100.9	9,144.0	6,030.7	14,380.9	793.8	785.8	7.9	785.8	770.1	15.7	1.2
NaOH	40.00											
Formic Acid	46.03	571.8										
Xylene	106.17											7,959.0
(By) Products												
Na-CPMPA	310.10											
MeOH	32.00											
Na-RPA 90946	296.10											
RPA 90946	274.10		3,191.1			3,175.1	3,143.3		3,143.3		3,127.6	
NaCHO2	68.01		844.4		844.4							
Others	--											158.8
Stream Weight, lb/batch		672.4	13,179.5	6,030.7	15,225.4	3,968.9	3,929.2	7.9	3,929.2	770.1	3,143.3	8,118.9
Stream Volume, gal (ft3)		68.4	1,631.1	724.0	1,740.7	453.8	449.2	0.9	{105.11}	92.5	{126.14}	1,124.6
Temperature, °F		77.0	68.0	68.0	68.0	68.0	68.0	68.0	212.0	212.0	212.0	68.0
Pressure, psia (torr)		14.7	14.7	14.7	14.7	14.7	14.7	14.7	14.7	14.7	14.7	14.7
Density, g/cc (lb/ft3)		1.18	0.97	1.00	1.05	1.05	1.05	1.05	{37.4}	{1.00}	{24.9}	0.87
Viscosity, cP (CSt)												
Molar Yield (Overall)			95.0%								{85.7%}	
Vessel Nominal Volume, gal (ft3):			4,000.0	4,000.0	30,000.0				{240.0}	500.0	{240.0}	4,000.0
Vessel Filled Level (%):			41%	18%	6%				44%	18%	53%	28%

**Aventis Cyllide in Unit 5—2,
Heat & Mass Balance**

Assumptions:

1. Average Rate @ 65% Overall O.S.T.
2. 0.5% Material Loss through centrifugation
3. Centrifuge discharge @ 20% LOD
4. Centrifugation Cycle=1.25 hours @ 300 lb./pi
5. Vac. Dryer discharge at 0.5% LOD

Stream No.														
Description		Recycled Xylene	Water to Recycle	Forerun Cut to Org Waste	Recycled Water	Organic Waste	Salt Waste							
Component	MW													
Raw Materials														
CPDM	158.10													
2,4 DCA	162.02													
NaOCH3	54.02													
MeOH	32.00			25.0		25.0								
H2O	18.00		15,166.8	200.0	14,993.8	1.2	173.0							
NaOH	40.00		1,136.8											
Formic Acid	46.03													
Xylene	106.17	6,337.2		30.0		1,621.8								
(By) Products														
Na-CPMPA	310.10													
MeOH	32.00					2,772.6								
Na-RPA 90946	296.10													
RPA 90946	274.10													
NaCHO2	68.01		844.4				844.4							
Others	--					158.8								
Stream Weight, lb/batch		6,337.2	17,148.0	255.0	14,993.8	4,579.3	1,017.4							
Stream Volume, gal (ft3)		877.8	1,906.1	38.3	1,800.0	671.0	(14.20)							
Temperature, °F		75.0	68.0	68.0	68.0	68.0	68.0							
Pressure, psia (torr)		14.7	14.7	14.7	14.7	14.7	14.7							
Density, g/cc (lb/ft3)		(0.87)	1.08	0.80	1.00	0.82	(71.65)							
Viscosity, cP (CSt)														
Molar Yield (Overall)														
Vessel Nominal Volume, gal (ft3):			9,000.0			5,000.0	(27.0)							
Vessel Filled Level (%):			21%			13%	53%							

Aventis Cyclanilide in Unit 5---2,4-DCA Whole Drum Charge

Cycle Time Analysis

		<u>Step Cycle Time</u>	<u>Vessel Cycle Time</u>	
Coupling Reaction (R-5104)	Press/Vac Test	1.0	|	
	Charge DCA	<u>0.8</u>		
	Charge Xylene	<u>0.9</u>		
	Heat to 40°C	0.5		
	Charge CPDM	<u>0.8</u>		
	Draw Vacuum	0.3		
	Heat to 60°C	0.8		
	Charge Na Methoxide	2.5		
	Distill MeOH/Xylene	<u>1.9</u>		
	Charge Water	<u>0.6</u>		
	Stir/Settle	1.5		
	Transfer to Hydrolysis Rxtr	<u>1.0</u>		Σ = 12.6
Hydrolysis Reaction (R-5101)	Charge Water	<u>0.4</u>	|	
	Draw Vacuum	0.7		
	Heat/Reflux	3.0		
	Distill MeOH	3.0		
	Phase Separate / Transfer	2.0		Σ = 9.0
Precipitation (R-5103)	Charge Formic Acid	1.5	|	
	Mix	1.0		
	Sample/Results	0.8		
	Transfer	<u>1.4</u>		Σ = 6.0
Isolation (V-5312, CF-5701, D-5700)	Centrifuge Batch	<u>16.5</u>	|	Σ = 16.5 (240 lb/hr)
Drying/Packaging (D-7100)	Charge <u>2</u> batches	2.0	|	
	Dry Batch	18.0		
	Packout	2.0		Σ = 11.0 (allocated time/batch)

Rate Limiting <u>Vessel Time</u> 16.5 hours

Total Time for Batch: 55.2 hours
(Charge to Packout)

Notes:
n.n.n indicates calculated value,
otherwise value is estimated



Internal Correspondence

To: G. Pratt
CC: C. McGee, J. Rone
From: David C. Guffey
Date: 04 January 2000
RE: Estimated Cyclanilide 90946 Waste Costs

Per P. Fields telephone conversation on 4th January 2000, the estimated waste cost for Cyclanilide Organic Waste is \$0.25/lb and for Aqueous Waste is \$0.30/gal (assuming the COD loading is too great for our ponds).

For the latest material balance (attached) these numbers correspond to \$0.461/lb Cyclanilide Organic and \$0.039/lb Cyclanilide Aqueous for a total waste cost of \$0.500/lb Cyclanilide (~~\$0.227~~ kg Cyclanilide). Note that all references to Cyclanilide are for dried final product.

*1.10

Please feel free to contact me with further questions, comments, etc.

Regards.

Post-It® Fax Note	7671	Date	1/4/00	# of pages	04
To	Geoff Pratt	From	D.C. Guffey		
Co /Dept.		Co.			
Phone #		Phone #			
Fax #		Fax #			

Rhone Poulenc RPA 90946 (Cyclanilide)--DeGussa-Huls Technology Basis
Heat & Mass Balance

<u>Summary of Results</u>	
Final Product lb/bx:	1,947 lb
Limiting Cycle Time:	15.0 hours
Final Product lb/day:	3,111 lb/day
Final Product MT/day:	1.4 MT/day
Producty @ 2 Trains:	2.8 MT/day

Assumptions:

- | | |
|---|---|
| 1. Process overall 80% O.S.T. | 6. All Yield calculations based on CPDM |
| 2. 0.5% Material Loss through centrifugation | 7. -- |
| 3. Centrifuge discharge @ 20% LOD | 8. -- |
| 4. Centrifugation Cycle=45 minutes @ 400 lb./plow | 9. -- |
| 5. Dryer discharge at 0.5% LOD | 10. -- |

Stream No.	Description	R-1		R-2			R-3			R-4		
		1	2	3	4	5	6	7	8	9	10	11
		Premix Initial Charge	R-2 Charge + Premix	MeOH-Tol Azeo Strip	R-2 Water Charge	Intermed Xferred to R-3	R-3 Water Charge	R-3 Hydr. Intermediate	MeOH Distillat'n	Intermed. Xferred to R-4	Hydrol. Org. Phase to Rec'y	R-4 Acid Charge
Component	MW											
Raw Materials												
CPDM	158.10		1,411.0									
2,4 DCA	162.00	1,411.0	1,411.0									
NaOCH3	54.00		533.3									
MeOH	32.00		1,244.5									
H2O	18.00				3,703.8	3,703.8	3,351.0	7,054.8		7,054.8		
NaOH	40.00							143.0				
Formic Acid	46.03											705.5
Toluene	92.15	2,116.4	7,231.2	711.8		6,519.4		6,519.4			6,519.4	
(By) Products												
Na-CPMPA	310.10					2,767.5						
MeOH	32.00			1,876.6				285.6	285.6			
Na-RPA 90946	296.10							2,642.5		2,642.5		
RPA 90946	274.10											
NaCHO2	68.01											
Others	--											
Stream Weight, lb/batch		3,527.4	11,830.9	2,588.4	3,703.8	12,990.8	3,351.0	18,645.2	285.6	9,697.3	6,519.4	705.5
Stream Volume, gal (ft3)		488.5	1,502.9	382.8	444.6	1,834.7	402.3	2,060.0	43.3	1,200.1	900.6	71.8
Temperature, °F		77.0	77.0	146.3	68.0	148.5	230.0	77.0	212.0	68.0	77.0	77.0
Pressure, psia (torr)		14.7	14.7	{400}	14.7	14.7	14.7	14.7	14.7	14.7	14.7	14.7
Density, g/cc (lb/ft3)		0.87	0.95	0.81	1.00	0.85	1.00	0.97	0.79	0.97	0.87	1.18
Viscosity, cP (cSt)												
Molar Yield (Overall)												

**Rhone Poulenc RPA 90946 (Cycl.
Heat & Mass Balance**

Assumptions:

1. Process overall 80% O.S.T.
2. 0.5% Material Loss through centrifugation
3. Centrifuge discharge @ 20% LOD
4. Centrifugation Cycle=45 minutes @ 400 lb./p
5. Dryer discharge at 0.5% LOD

Stream No.	Description	R-5	CF	Dryer	Packout	Solvent Recovery		Water Recovery		Waste Streams	
		12	13	14	15	16	17	18	19	XX	XX
		Precipit'd R-4 Prod't to Centrif.	Wash + ML Disch.	Wet Prod't to Dryer	Dried Final Product	Toluene to Recycle	Recycled Toluene	Water to Recycle	Recycled Water	Organic Waste	Aqueous Waste
Component	MW										
Raw Materials											
CPDM	158.10										
2,4 DCA	162.00										
NaOCH3	54.00										
MeOH	32.00										
H2O	18.00	7,054.8	7,369.3	733.9	12.2	10.4		8,103.2	6,721.5	10.4	1,381.7
NaOH	40.00										
Formic Acid	46.03										
Toluene	92.15					6,519.4	5,320.8			1,198.6	
(By) Products											
Na-CPMPA	310.10										
MeOH	32.00									2,162.2	
Na-RPA 90946	296.10										
RPA 90946	274.10	2,446.2		2,434.0	1,947.2						
NaCHO2	68.01	1,042.3	1,042.3					1,042.3			1,042.3
Others	—					0.0				243.4	
Stream Weight, lb/batch		10,543.3	8,411.6	3,167.8	1,959.3	6,529.8	5,320.8	9,145.5	6,721.5	3,614.6	2,424.0
Stream Volume, gal {ft3}		1,304.8	981.7			904.5	737.0	1,016.6	806.9	529.9	253.0
Temperature, °F		68.0	68.0	212.0	212.0	68.0	75.0	68.0	68.0	68.0	68.0
Pressure, psia {torr}		14.7	14.7	14.7	14.7	14.7	14.7	14.7	14.7	14.7	14.7
Density, g/cc {lb/ft3}		0.97	1.05			0.87	0.87	1.08	1.00	0.82	1.15
Viscosity, cP {cSt}											
Molar Yield {Overall}											

Rhone Poulenc RPA 90946 (Cyclanilide)—DeGussa-Huls Technology Basis
Cycle Time Analysis

Rate Limiting Time 15.0 hours
--

	<u>Step Cycle Time</u>	<u>Vessel Cycle Time</u>
Premix Prep (R-1)	Charge Toluene	<u>0.1</u>
	Charge 2,4 DCA	<u>0.7</u> [Drum]
	Mix/Hold	0.5
		$\Sigma = 1.3$
Coupling Reaction (R-2)	Charge Premix	<u>0.3</u>
	Draw Vacuum	0.3
	Heat to 56-59°C	0.8
	Charge Na Methoxide	3.0
	Distill MeOH/Toluene Azeotrope	2.0
	Cool to 60-65°C	1.0
	Charge Water	0.2
	Transfer to Hydrolysis Rxtr	1.0
		$\Sigma = 8.6$
Hydrolysis Reaction (R-3)	Charge Water	<u>1.0</u>
	Heat/Reflux	5.0
	Distill MeOH	1.0
	Cool Rxtr <50°C	1.0
	Sample/NaOH Adjust	5.0
	Phase Separate / Transfer	2.0
		$\Sigma = 15.0$
Acidification (R-4)	Cool >25°C	1.0
	Charge Formic Acid	3.0
	Mix	0.5
	Sample/Results	0.5
Centrifugation (R-5)	Transfer	0.5
	Centrifuge Batch	<u>4.6</u>
		$\Sigma = 14.7$
Drying	Charge 1.5 batches	1.0
	Dry Batch	8.0
	Packout	1.5
		$\Sigma = 10.5$

Note:

nn.n indicates calculated value,
 otherwise value is estimated

Total Batch Time Req'd 50.1 hours

Confirmation Report-Memory Send

Time : Jan-04-00 11:27
 Tel line 1 : +8705723795
 Name : CEDAR CHEMICAL

Job number : 415
 Date : Jan-04 11:22
 To : 19016845398
 Document Pages : 04
 Start time : Jan-04 11:22
 End time : Jan-04 11:27
 Pages sent : 04
 Job number : 415

***** SEND SUCCESSFUL *****



Internal Correspondence

To: G Pratt
CC: C. McVies. J Rona
From: David C. Guffey
Date: 04 January 2000
RE: Estimated Cyclanilide 90946 Waste Costs

Per P. Fields telephone conversation on 4th January 2000, the estimated waste cost for Cyclanilide Organic Waste is \$0.25/lb and for Aqueous Waste is \$0.30/gal (assuming the COD loading is too great for our ponds).

For the latest material balance (attached) these numbers correspond to \$0.461/lb Cyclanilide Organic and \$0.039/lb Cyclanilide Aqueous for a total waste cost of \$0.500/lb Cyclanilide (\$0.227/kg Cyclanilide). Note that all references to Cyclanilide are for dried final product.

Please feel free to contact me with further questions, comments, etc.

Regards.

Post-it® Fax Note	7871	Date	1/4/00	Page	04
To	G. PRATT	From	D. C. GUFFEY		
Co/Dept		Co			
Phone #		Phone #			
Fax #		Fax #			



File

Internal Correspondence

To: G. Pratt
CC: C. McGee, J. Rone
From: David C. Guffey
Date: 04 January 2000
RE: Estimated Cyclanilide 90946 Waste Costs

Per P. Fields telephone conversation on 4th January 2000, the estimated waste cost for Cyclanilide Organic Waste is \$0.25/lb and for Aqueous Waste is \$0.30/gal (assuming the COD loading is too great for our ponds).

For the latest material balance (attached) these numbers correspond to \$0.461/lb Cyclanilide Organic and \$0.039/lb Cyclanilide Aqueous for a total waste cost of \$0.500/lb Cyclanilide (\$0.227/kg Cyclanilide). Note that all references to Cyclanilide are for dried final product.

Please feel free to contact me with further questions, comments, etc.

Regards.

Rhone Poulenc RPA 90946 (Cyclanilide)—DeGussa-Huls Technology Basis
Heat & Mass Balance

Assumptions:

- | | |
|---|---|
| 1. Process overall 80% O.S.T. | 6. All Yield calculations based on CPDM |
| 2. 0.5% Material Loss through centrifugation | 7. --- |
| 3. Centrifuge discharge @ 20% LOD | 8. --- |
| 4. Centrifugation Cycle=45 minutes @ 400 lb./plow | 9. --- |
| 5. Dryer discharge at 0.5% LOD | 10. --- |

Summary of Results	
Final Product lb/bx:	1,947 lb
Limiting Cycle Time:	15.0 hours
Final Product lb/day:	3,111 lb/day
Final Product MT/day:	1.4 MT/day
Producty @ 2 Trains:	2.8 MT/day

Stream No.	Description	R-1		R-2			R-3			R-4		
		1	2	3	4	5	6	7	8	9	10	11
		Premix Initial Charge	R-2 Charge + Premix	MeOH-Tol Azeo Strip	R-2 Water Charge	Intermed Xferred to R-3	R-3 Water Charge	R-3 Hydr. Intermediate	MeOH Distillat'n	Intermed. Xferred to R-4	Hydrol. Org. Phase to Rec'y	R-4 Acid Charge
Component	MW											
Raw Materials												
CPDM	158.10		1,411.0									
2,4 DCA	162.00	1,411.0	1,411.0									
NaOCH3	54.00		533.3									
MeOH	32.00		1,244.5									
H2O	18.00				3,703.8	3,703.8	3,351.0	7,054.8		7,054.8		
NaOH	40.00							143.0				
Formic Acid	46.03											705.5
Toluene	92.15	2,116.4	7,231.2	711.8		6,519.4		6,519.4			6,519.4	
(By) Products												
Na-CPMPA	310.10					2,767.5						
MeOH	32.00			1,876.6				285.6	285.6			
Na-RPA 90946	296.10							2,642.5		2,642.5		
RPA 90946	274.10											
NaCHO2	68.01											
Others	---											
Stream Weight, lb/batch		3,527.4	11,830.9	2,588.4	3,703.8	12,990.6	3,351.0	16,646.2	285.6	9,697.3	6,519.4	705.5
Stream Volume, gal (ft3)		488.5	1,502.9	382.6	444.6	1,834.7	402.3	2,060.0	43.3	1,200.1	900.6	71.8
Temperature, °F		77.0	77.0	146.3	68.0	148.5	230.0	77.0	212.0	68.0	77.0	77.0
Pressure, psia (torr)		14.7	14.7	{400}	14.7	14.7	14.7	14.7	14.7	14.7	14.7	14.7
Density, g/cc (lb/ft3)		0.87	0.95	0.81	1.00	0.85	1.00	0.97	0.79	0.97	0.87	1.18
Viscosity, cP (cSt)												
Molar Yield (Overall)												

**Rhone Poulenc RPA 90946 (Cycl:
Heat & Mass Balance**

Assumptions:

1. Process overall 80% O.S.T.
2. 0.5% Material Loss through centrifugation
3. Centrifuge discharge @ 20% LOD
4. Centrifugation Cycle=45 minutes @ 400 lb./p
5. Dryer discharge at 0.5% LOD

Stream No.	MW	R-5	CF	Dryer	Packout	Solvent Recovery		Water Recovery		Waste Streams	
		12	13	14	15	16	17	18	19	XX	XX
Description		Precipit'd R-4 Prod't to Centrif.	Wash + ML Disch.	Wet Prod't to Dryer	Dried Final Product	Toluene to Recycle	Recycled Toluene	Water to Recycle	Recycled Water	Organic Waste	Aqueous Waste
Component	MW										
Raw Materials											
CPDM	158.10										
2,4 DCA	162.00										
NaOCH3	54.00										
MeOH	32.00										
H2O	18.00	7,054.8	7,369.3	733.9	12.2	10.4		8,103.2	6,721.5	10.4	1,381.7
NaOH	40.00										
Formic Acid	46.03										
Toluene	92.15					6,519.4	5,320.8			1,198.6	
(By) Products											
Na-CPMPA	310.10										
MeOH	32.00									2,162.2	
Na-RPA 90946	296.10										
RPA 90946	274.10	2,446.2		2,434.0	1,947.2						
NaCHO2	68.01	1,042.3	1,042.3					1,042.3			1,042.3
Others						0.0				243.4	
Stream Weight, lb/batch		10,543.3	8,411.6	3,167.8	1,959.3	6,529.8	5,320.8	9,145.5	6,721.5	3,614.6	2,424.0
Stream Volume, gal {ft3}		1,304.8	961.7			904.5	737.0	1,016.6	806.9	529.9	253.0
Temperature, °F		68.0	68.0	212.0	212.0	68.0	75.0	68.0	68.0	68.0	68.0
Pressure, psia {torr}		14.7	14.7	14.7	14.7	14.7	14.7	14.7	14.7	14.7	14.7
Density, g/cc {lb/ft3}		0.97	1.05			0.87	0.87	1.08	1.00	0.82	1.15
Viscosity, cP {cSt}											
Molar Yield {Overall}											

Rhone Poulenc RPA 90946 (Cyclanilide)--DeGussa-Huls Technology Basis
Cycle Time Analysis

Rate Limiting Time 15.0 hours
--

		Step Cycle Time	Vessel Cycle Time	
Premix Prep (R-1)	Charge Toluene	0.1	Σ =	1.3
	Charge 2,4 DCA	0.7 [Drum]		
	Mix/Hold	0.5		
Coupling Reaction (R-2)	Charge Premix	0.3	Σ =	8.6
	Draw Vacuum	0.3		
	Heat to 56-59°C	0.8		
	Charge Na Methoxide	3.0		
	Distill MeOH/Toluene Azeotrope	2.0		
	Cool to 60-65°C	1.0		
	Charge Water	0.2		
	Transfer to Hydrolysis Rxtr	1.0		
Hydrolysis Reaction (R-3)	Charge Water	1.0	Σ =	15.0
	Heat/Reflux	5.0		
	Distill MeOH	1.0		
	Cool Rxtr <50°C	1.0		
	Sample/NaOH Adjust	5.0		
	Phase Separate / Transfer	2.0		
Acidification (R-4)	Cool >25°C	1.0	Σ =	14.7
	Charge Formic Acid	3.0		
	Mix	0.5		
	Sample/Results	0.5		
	Transfer	0.5		
Centrifugation (R-5)	Centrifuge Batch	4.6	Σ =	10.5
Drying	Charge 1.5 batches	1.0	Σ =	10.5
	Dry Batch	8.0		
	Packout	1.5		
Note:				
nn.n indicates calculated value, otherwise value is estimated				
		Total Batch Time Req'd	50.1	hours

Aventis CropScience



Serge RAVET
Strategic Sourcing Manufacturing Operations
ToS Manufacturing Manager
☎: (33) 4 72 65 29 20 - Fax: (33) 4 72 65 29 66

CEDAR
To the attention of Mr G. PRATT

Fax : (1) 901 884 5398

SR/PB - 002.00

Page(s) : 3

January 10, 2000

File

SUBJECT : MoU CYCLANILIDE

*CC Jim Rump
Kevin Payne*

Dear Geoffrey,

You will find herewith comments on the MoU, this document is still reviewed by our legal department but it seems important we progress on the points indicated below :

- Replacement of CPDM by CDM in the denomination of Cyclopopan 1,1 Dicarboxylic Acid Dimethyl Ether, (as it is in the Secrecy Agreement).
- Replacement of the wording "Definitive Agreement" by "Agreement".

• **2C Product :**

I remind that the estimate of our needs for the 3 next campaigns are the following :

- 1st Campaign = product available end of december 2000
- 2nd Campaign = product available end of may 2001
- 3rd Campaign = product available end of may 2002

The first campaign is sustained to the obtention of the right of importation of CDM in the US, thus it could be possible we have two campaigns in the first contract year.

Therefore, I propose that the volume of the third contract year should be the difference between 420 Metric Tons and the cumulated volume of the 2 previous contract years.

The minimum volume after the third contract year should not be precised.

• **2D Scheduling :**

R.P. will provide Cedar with an estimate one year before Product is required and these figures will be adjusted 3 months before the Campaign.

• **2E Raw Material Usage :**

For the avoidance of any doubt.

The saving under consumption of raw materials below - 3,5 % shall be shared equally.

• **2H Waste Disposal :**

As we have now an estimation now of the waste disposal I propose :

Replacement of "Cost of waste disposal shall be for Rhône-Poulenc" by "the cost of waste disposal charge to R.P. cannot exceed 1,7 \$/ Kg of product".

• **2I Toll Fee :**

To be clarified :

- The fee of 6,5 \$/ Kg applies on all the volume of production if the produced volume is above 200 Metric Tons in a contracted year.

- The index of reference for an escalation formula.

For the avoidance of doubt, to be precised that this toll fee has already included the amortization of the capital improvement of paragraph 2F.

• **3 Schedule of ranges Date :**

3C Maintain April 1, RP to deliver a first draft of an Agreement.

• **Additional clauses to be added :**

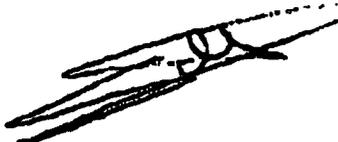
- a secrecy clause specific to the MoU.

- a new paragraph at the end of the document to provide for the assignment or transfert to the MoU or the Definitive agreement as the case may be to any entity which may be a successor in interest to Rhône-Poulenc.

- a new clause to provide for the settlement of disputes arising out in relation to this MoU.

Please don't hesitate to call me if you need some details on these points.

Best regards.



**Serge RAVET
Toll Manufacturing Manager**

Custom/Specialty Project Status

24-Feb-00

<i>Product</i>	<i>Customer</i>	<i>Engineer</i>	<i>Unit</i>	<i>Priority</i>	<i>Milestone</i>	<i>Deadline</i>	<i>Status</i>
Pentabrom	Tetra	Pirigy	1	H	NA	NA	Waiting on order to resume production
Telene	BFG	Pirigy	1	M	3-Mar	1-Apr	Preparing for short notice run
Cyclanilide	Rhone/Poulenc	Guffey	1	H	26-Feb	1-Oct	Trip to RP and Huls
Y-15055	Witco	Krusling	5	H	1-Mar	15-Mar	Hazop in prep for March 15 startup
Octasol	Octel	Siebert	5	H	10-Mar	31-Mar	Waiting on info
PPS	Ticona	Siebert	5	M	25-Feb	15-Apr	Scheduling teleconference; hot oil
TA	Cedar	Siebert	5	H	1-Mar	1-May	Cost/timing for RO
Goodbuffers	Cedar	Pirigy	5	H	1-Apr	1-Jun	Final costs if purchased
2AB	Cedar	Pirigy	5	M	1-Apr	1-Jul	Mass balance, PFD
Metolachlor	Cedar	Krusling	5	H	25-Feb	1-Sep	Complete initial review, PFD
DMC	Biochemie	Krusling	NA	M	1-Apr	1-May	Initial Review
Flouro Poly	Richman	NA	NA	L	NA	NA	Waiting for info
CS-1	Richman	Guffey	Hungary	M	1-Apr	NA	Developing PFD
4 TBCH	PPG	Pirigy	NA	L	NA	NA	Proposal to PPG for pilot reactor
IPBC	Marvac	Guffey	NA	L	NA	NA	Waiting on info
Doverphos	Dover	Siebert	5	L	NA	1-Apr	Looks to be dead

Products are listed by unit in the order they will probably run. The bottom section lists those that are wildcards at this time.

To: Chris McGee
From: Kevin Payne
Date: February 25, 2000
Subject: Custom/Specialty Projects

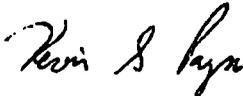
This packet is an overview regarding projects we are currently working on. I did not include those projects which do not appear likely to run this year. You will note the aggressive timelines for projects in Unit 5. It is apparent that decisions need to be made relatively quickly regarding TA, Goodbuffers, and 2AB. If they are all to be made, the startup of Metolachlor may need to be pushed back. However, the initial numbers we heard from Stanley would indicate that Metolachlor would be our product of choice.

I have moved Dover to the bottom of the list, and am considering it dead for now. I do not see how we could fit it into this year's production.

With TA requiring the high pressure reactor, and Metolachlor projections being more than our initial estimation for production capability, it would be advisable to begin looking at either Unit 5 expansion, or better, Unit 8. A Metolachlor unit would enable us to separate the herbicide and pharmaceutical use products. Unit 1 is an option for Metolachlor, but with BFG and Cyclanilide, there is not sufficient opportunity there either.

I will be back in the plant on March 6th. If you have any questions or comments, I can answer them then, or you can ask Jim Krusling, who will be filling in during my absence.

Thank you,



Kevin S. Payne

Custom/Specialty Project Status

24-Feb-00

Product	Customer	Engineer	Unit	Priority	Milestone	Deadline	Status
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2AB	Cedar	Pirigy	5	M	1-Apr	1-Jul	Mass balance, PFD
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DMC	Biochemie	Krusling	NA	M	1-Apr	1-May	Initial Review
Flouro Poly	Richman	NA	NA	L	NA	NA	Waiting for info
CS-1	Richman	Guffey	Hungary	M	1-Apr	NA	Developing PFD
4 TBCH	PPG	Pirigy	NA	L	NA	NA	Proposal to PPG for pilot reactor
IPBC	Marvac	Guffey	NA	L	NA	NA	Waiting on info
Doverphos	Dover	Siebert	5	L	NA	1-Apr	Looks to be dead

Products are listed by unit in the order they will probably run. The bottom section lists those that are wildcards at this time.

BFG Telene Unit 1

Expected run date: April 1 thru August

This is a product which has been successfully made already. There was a capital plan to improve the process and allow us to run two products simultaneously in Unit 1. However, due to BFG delaying its orders, there will no longer be time to implement these plans.

Key dates:

March 3rd - this is the deadline established for Jim Pirigy to become the process expert. He has until then to read, ask questions of others engineers or operators, or Geoff Pratt. After that date, he is expected to have the knowledge required.

April 1st - this is the latest date we can start Telene production and still make the number of pounds needed before we must switch to Cyclanilide production for RP.

There are no risks associated with this product. Likewise, there is no capital.

Team membership - There is no team for this product since it has been previously manufactured. However, if an order comes in, Jim will request the help of a lead operator, Production Engineer, and lab tech to insure a smooth startup.

Rhone Poulenc Cyclanilide Unit 1

Expected run date: October 1 thru 1st quarter 2001

Key dates:

Feb 26th - Joe Mancini, David Guffey, Tony Dinculescu, and Kevin Payne will meet with RP and Huls.

April 1st - a definite process is defined and agreed upon by both parties.

April 15th - equipment is ordered

May 1st- concrete production and waste costs are generated

September 1st - raw materials arrive

October 1st - production begins

Benefits -

This product will not be a large profit generator. However, it will allow us to purchase some new equipment, will keep the unit active for several months, and maintains our good relationship with RP.

Risks -

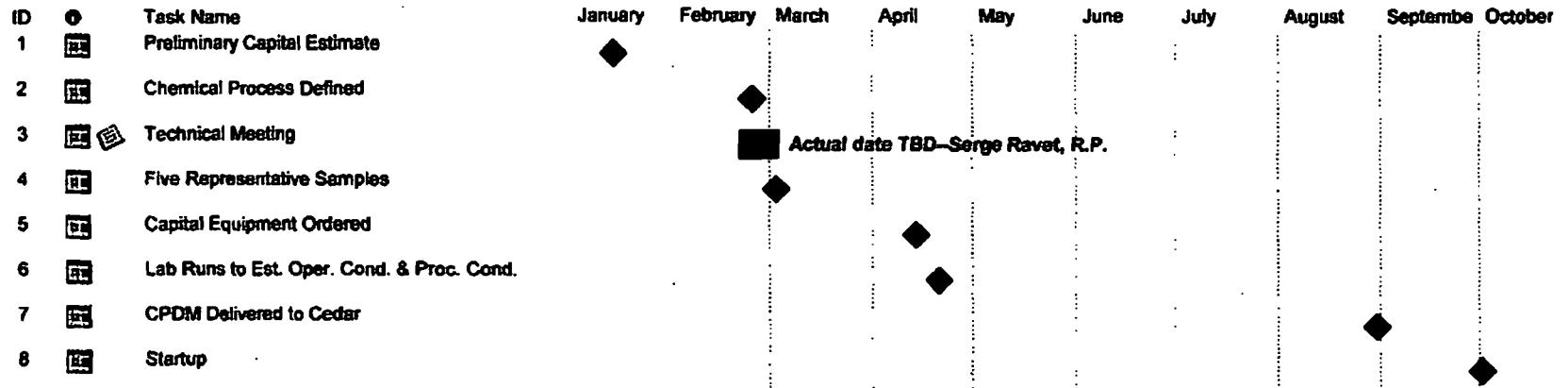
Our R&D department has found several improvements to the original process. RP must agree to these changes for us to manufacture Cyclanilide efficiently.

Capital -

Until process fully defined, difficult to say. Could range from \$750,000 to \$1.5 million.

Team membership - David Guffey, Doc Tony, Mike Reinsegar, and Greg Satterfield.

Rhône-Poulenc Cyclanilide RPA 90946 Preliminary Schedule



CK Witco

Y-15055

Unit 5

Expected run date: March 15 thru March 22nd

Key Dates:

February 25th - meeting held with production, maint.,
EH&S, and the lab to discuss.

March 1st - Hazop

March 15th - startup

Benefits -

This is a trial run of 1 batch. Total revenue will not exceed \$50,000 in all probability. However, CKWitco has many products tolled, so it is advantageous to develop a working relationship. They believe this product, and another similar, may become large quantity endeavors.

Risks -

We have no good way to distill such a small quantity. We are looking to see if an unused 500 gallon rx in Unit 6 might work. Also, the product is very sensitive to H₂O, so we must be extremely careful in handling the drums.

Team membership - Jim Krusling, Doc Bill, Stanley Herrington, and Larry McDermott.

Octel Octasol Unit 5

Expected run date: April 3 to April 17

Key Dates:

March 10th - By this date we need to have received information regard specs for water and product test method.

March 20th - Source DI water, Hazop

April 3rd - Startup

Benefits-

This is another trial, just 1 to 3 batches. However, my impression was they would be willing to pay a decent per dium.

Risks -

A new heat exchanger must be installed, and the lab runs did not go very smoothly - product left on the side of the rx and did not gell as well as expected.

Capital -

Installation of the heat exchanger will cost approx \$15,000.

Team members - Jeff Siebert, Doc Bill, Mike Reinsager, and Greg Satterfield

Ticona PPS

Unit 5

Expected run dates: April 21 to May 1

Key dates:

February 25th - Scheduling teleconference

March 10th - Need a process description

March 17th - Hot oil on the vacuum dryer

April 3rd - Hazop

April 21st - Startup

Benefits -

This appears to be a fairly simple process, and good become a decent source of pounds and income in the future.

Risks -

There are still too many unknowns with project with the manufacture date getting close. The melting point of the product and the dryer temperature are fairly close(30 degrees) so problems could be encountered with hot spots. If we don't hear from Ticona in the next 2 to 3 weeks, we'll have to drop this one.

Capital -

The dryer needs a hot oil system. This should cost approx \$10,000.

Team members - Jeff Siebert, Mike Reinsager, Doc Bill

TA

Unit 5

Expected run date: May 8 to August 1

Key dates:

March 1st - A good estimate of RO system achieved

**March 8th - Decision reached on purchase or rental
of RO unit, unit ordered**

**April 8th - RO unit received; Equipment for lab ordered
if CAR approved**

May 1st - cleanup begins on unit

May 8th - startup

Benefits -

The benefits of TA production have already been determined.
The benefit of the RO water system is the ability to produce
Ultra Pure material and increase sales.

Risks -

There are several risks with this campaign. My experience
with these kinds of RO units (UV lamp required) is that they
can be very tempermental. It is important to get the unit in early
and test it. I recommend at least a service contract; it would be
preferable to sign a lease. Also, there is no guarantee that the
improved water will result in Ultra pure material. There are numerous
other potential points of contamination.

Logistics of product storage will also be difficult.

Finally, time is an issue. This is a shorter time than required to produce
a years supply, but it must be cut short if Goodbuffers and 2AB
are to be produced before Metolachlor startup. A decision will need
to be made whether to follow this plan or cancel Goodbuffers and 2AB
and extend the TA run, or postpone Metolachlor startup.

Team members - Jeff Siebert, Don Malcom, the TA QIT

Goodbuffers

Unit 5

Expected run date: August 5 to August 15

Key dates:

April 1st - A decision on purchase must be made

April 10th - Information regarding resins needed

April 17th - Cost estimates for equipment

May 1st - Decision reached regarding production; will we make it this year or not

May 21st - Assuming we decide to make it, final cost and waste numbers generated

June 1st - Equipment ordered

July 15th - Hazop

August 2nd - Unit cleanup

August 5th - Starup

Benefits -

The purchase and production of Goodbuffers will, in theory, allow us to enter more markets in TA, as well as make us a sole source provider for buffers. The purchase of the technology includes a fair inventory, which may be enough to delay production.

Risks -

Cleanliness is essential for success, and we will not have much cleanup time. Also, the purchase of Goodbuffers is supposed to include TA-HCl technology, but we have seen nothing at this point. Lack of time for production is a key issue. Finally, there is a very real risk that we will have no success in this market, nor time or location to make it in the future if Metolachlor is a success.

Team members - Jim Pirlgyi, Doc Bill, Geoff Pratt

2AB

Unit 5

Expected run date: August 22 to September 8

Key dates:

April 1st - Initial PFD and mass balance complete

April 15th - Nitro-propane process received

May 1st - PFD and mass balance for Nitro-propane

June 1st - Cost and waste numbers generated

June 15th - Equipment, if any, ordered

July 15th - Hazop

August 16th - Cleanup

August 22nd - Startup

Benefits -

2AB has been made in Unit 5 before, about 10 years ago. Nitro-propane, however, is new. This would complete the buffers family.

Risks -

Nitro-propane is a highly dangerous material. We must be very careful in handling, and have good data from the lab. Trying to rush in this fashion could be hazardous on this one.

We have located old documents on the previous 2AB process and are reviewing. We just don't have much knowledge at this point.

Capital -

Unknown

Team members - Jim Pirigyl, Doc Bill, Geoff Pratt

2AB Preliminary Schedule

Task Name	Start	March	April	May	June	July	August
PFD and mass balance	Mon 4/3/00		◆				
Receive Nitropropane process	Mon 4/17/00		◆				
Nitro mass balance, PFD	Mon 5/1/00			◆			
Cost and waste numbers	Thu 6/1/00				◆		
Order equipment	Thu 6/15/00				◆		
Hazop	Mon 7/17/00					◆	
Prepare for run	Wed 8/16/00						◆
Startup	Tue 8/22/00						◆

Metolachlor**Unit 5**

Expected run date: September 18 to unknown

Key dates:

February 25th - Initial review complete

March 25th - Initial lab work complete

April 10th - PFD complete, 1st run at costs

May 1st - Process defined

June 1st - Equipment ordered if needed

July 1st - Final cost and waste numbers generated

August 1st - Hazop

September 1st - Ready to run

September 18th - Startup date under this plan

Benefits -

The numbers we were given makes this sound like a tremendous opportunity. The unit would need to be expanded, or Unit 8 constructed, to produce the number of pounds projected (8 to 12 million). Our initial calculation shows our capacity around 6 million/year. The unit would always be running, no dead time.

Risks -

As mentioned in the benefits, we believe expansion would be required for the Metolachlor. Certainly, if Metolachlor, TA, BFG, and Cyclanilide are all to be produced expansion will be needed.

We have just begun to develop a process, so timing is critical. We are attempting to have the process ready to start September 1, although the schedule I have developed calls for startup September 18.

Doc is researching to insure there is no Patent infringement problem.

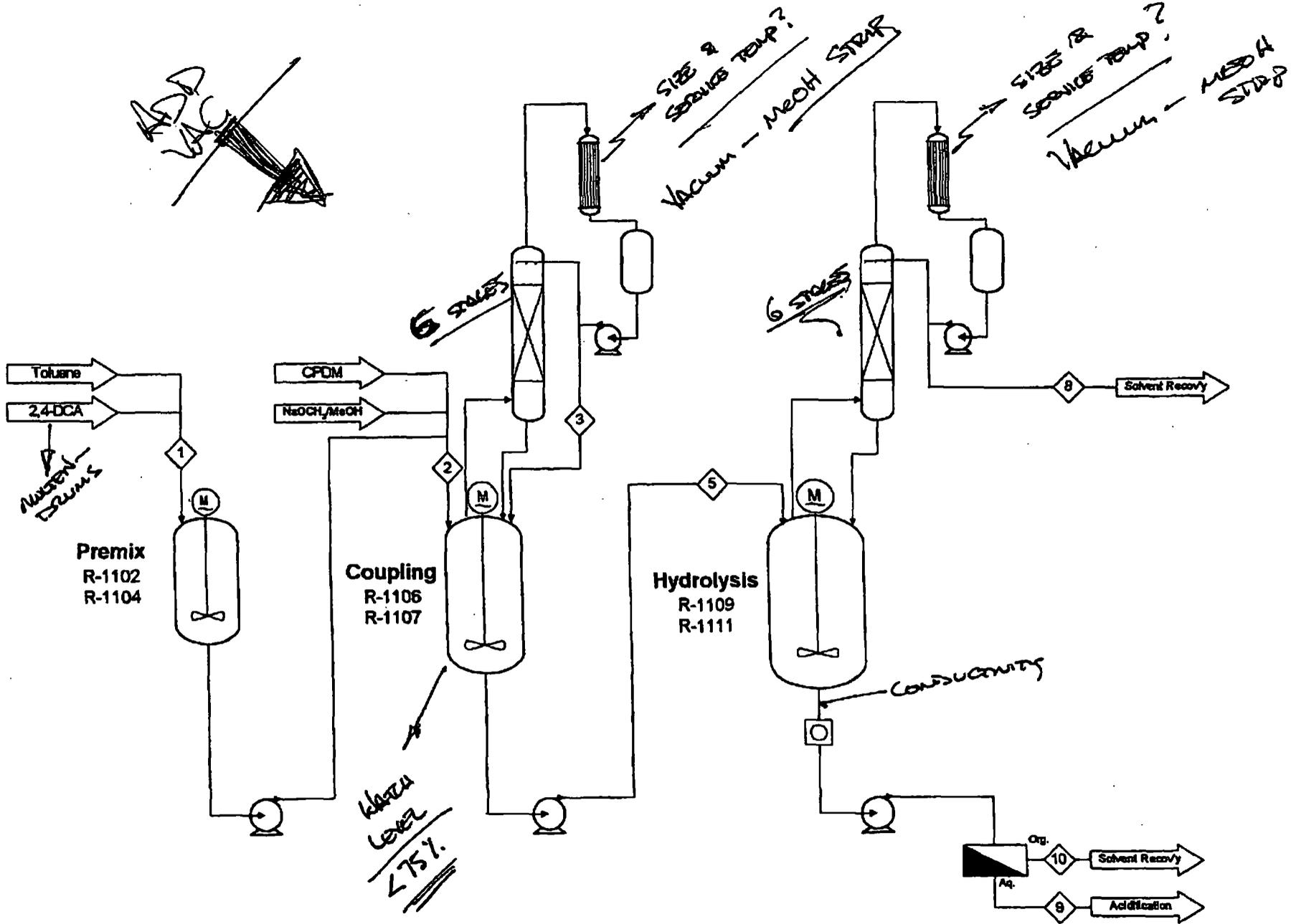
Capital -

Unknown. However, it is quite feasible that a new unit will be needed.

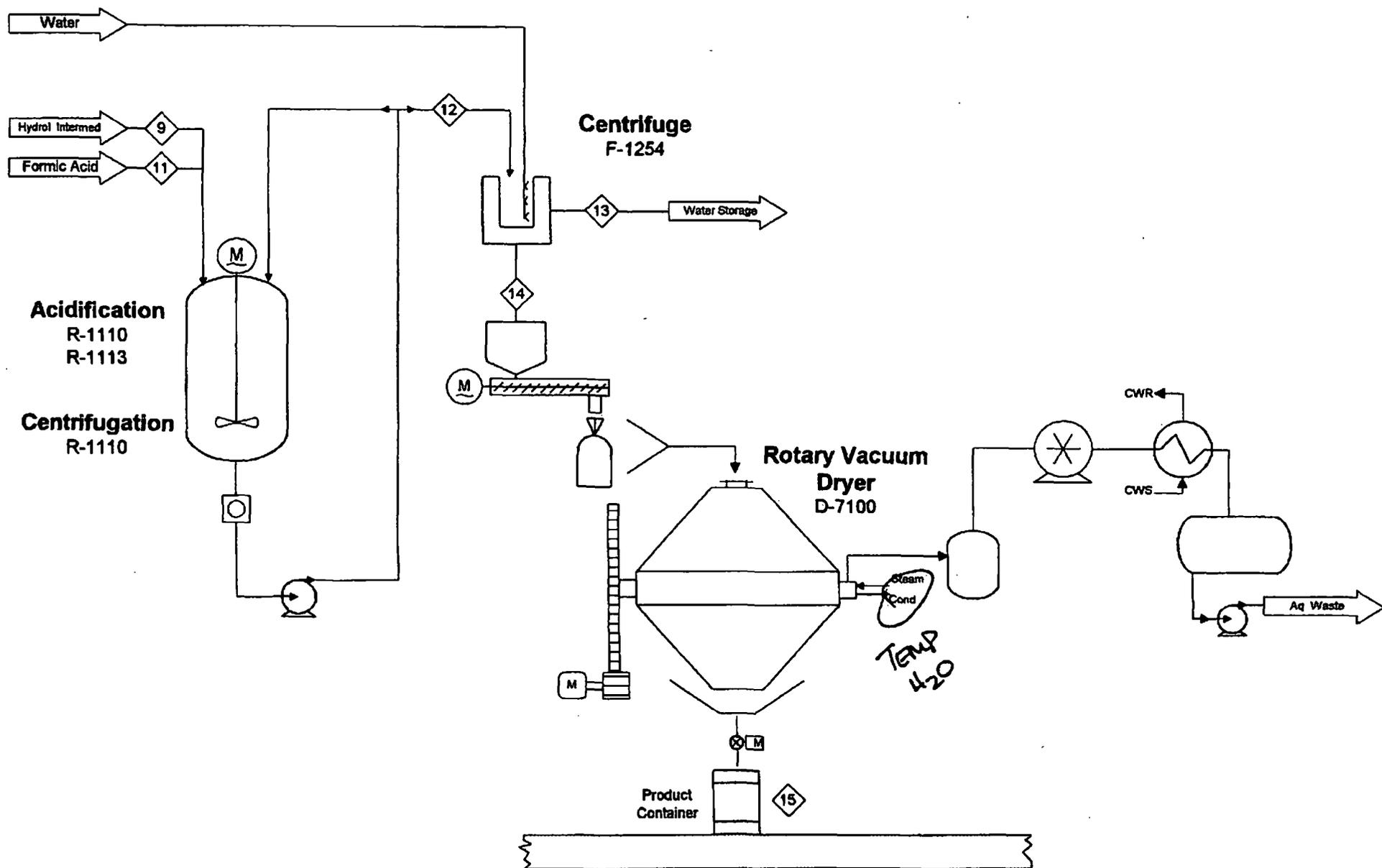
Team members - Jim Krusling, Doc Bill, and Greg Satterfield

Metolachlor Preliminary Schedule

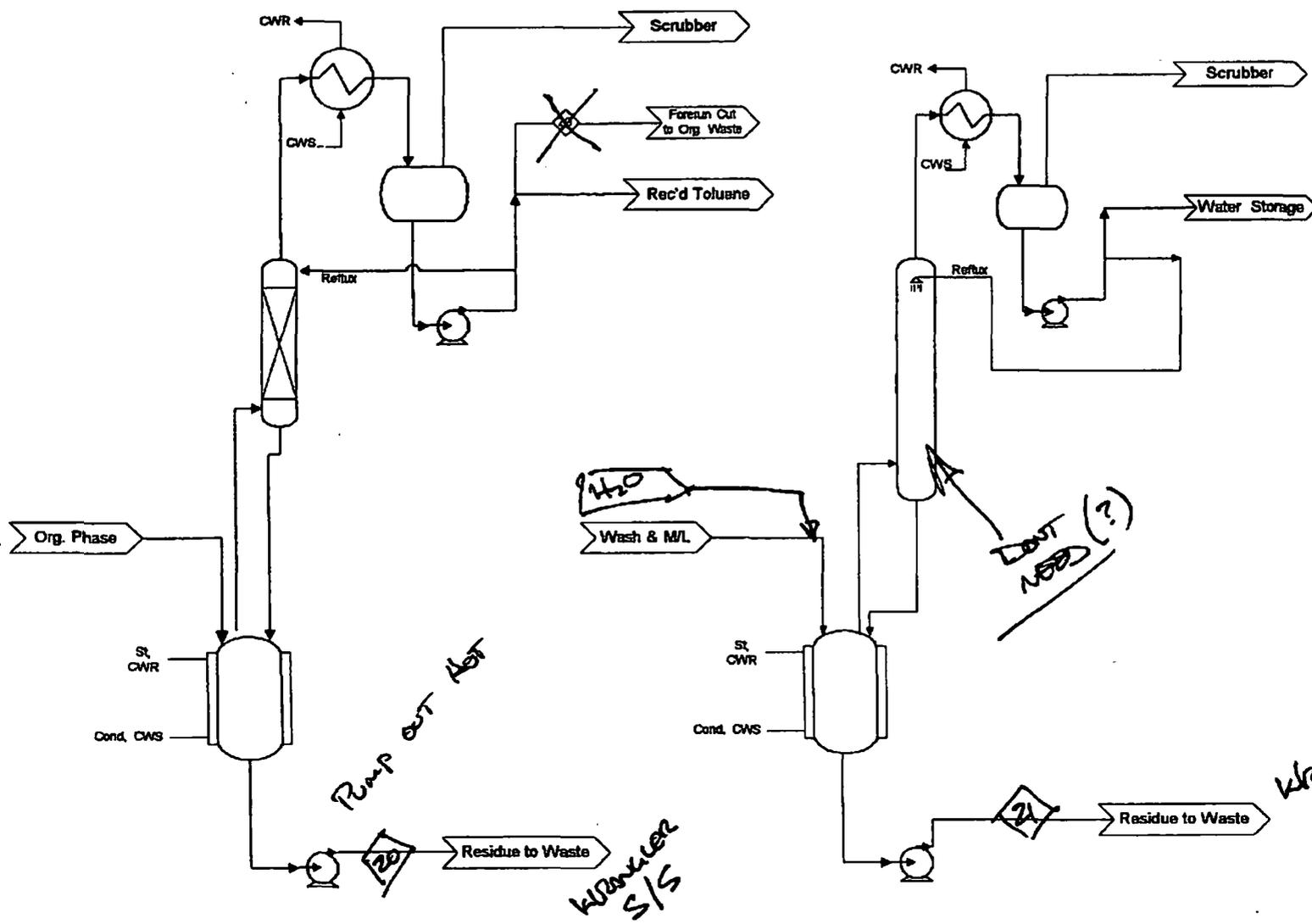
Task Name	Start	February	March	April	May	June	July	August	September
Initial review complete	Fri 2/25/00	◆							
Initial lab work complete	Fri 3/24/00		◆						
PFD, 1st cost estimate	Mon 4/10/00			◆					
Process defined	Mon 5/1/00				◆				
Equipment ordered	Thu 6/1/00					◆			
Final cost, waste numbers	Mon 7/3/00						◆		
Hazop	Tue 8/1/00							◆	
Ready if necessary	Fri 9/1/00								◆
Planned startup	Mon 9/18/00								◆



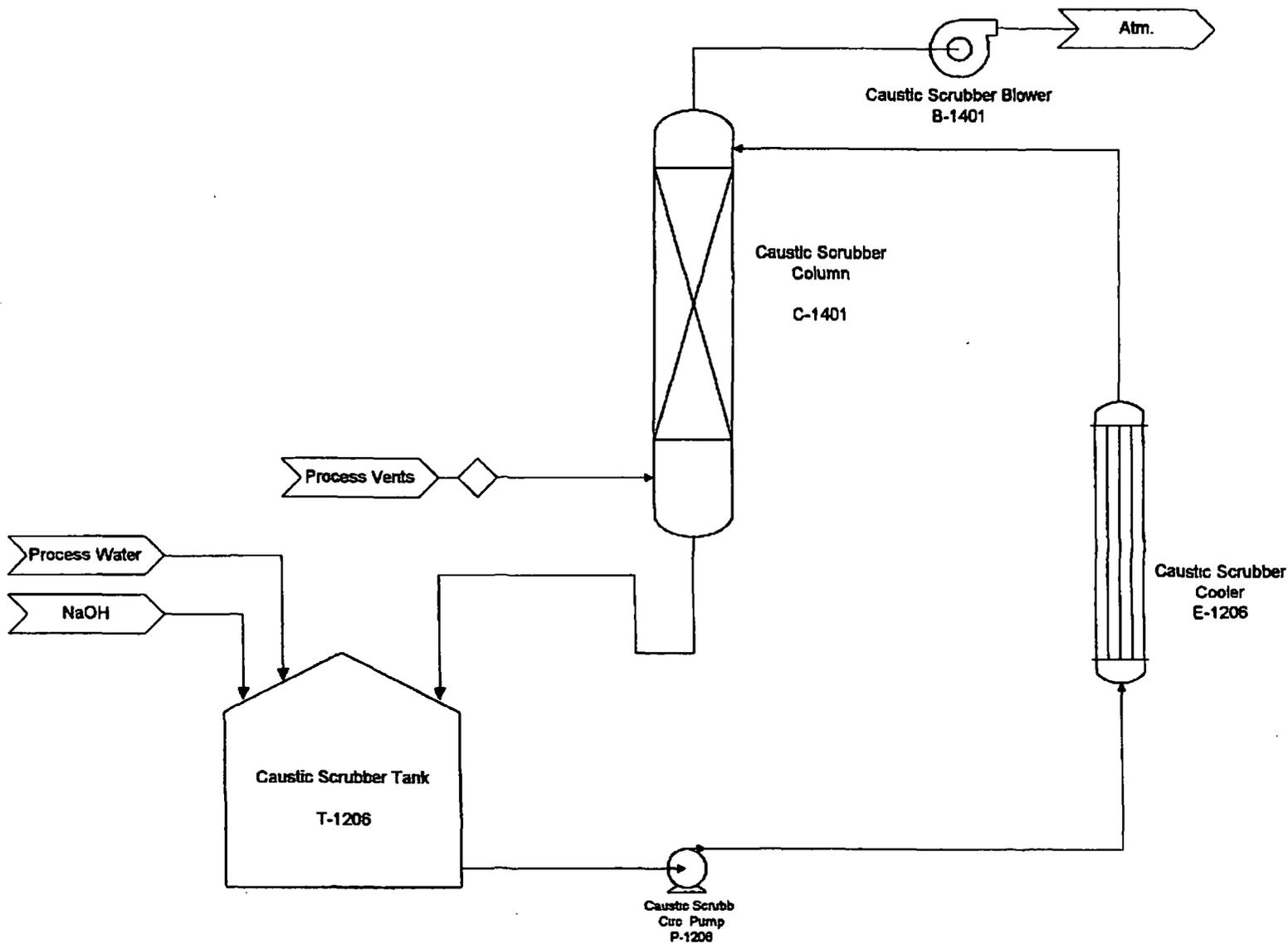
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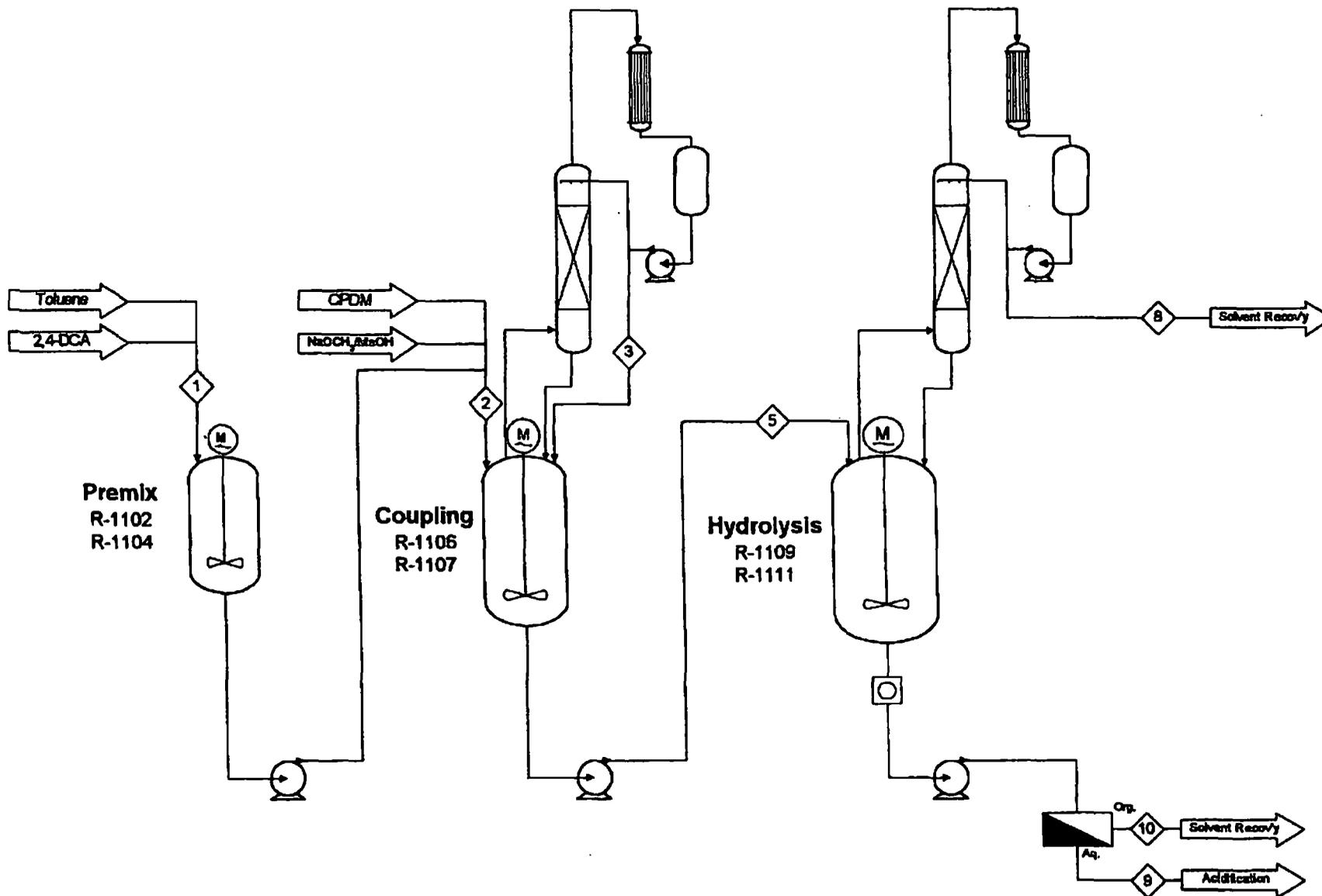
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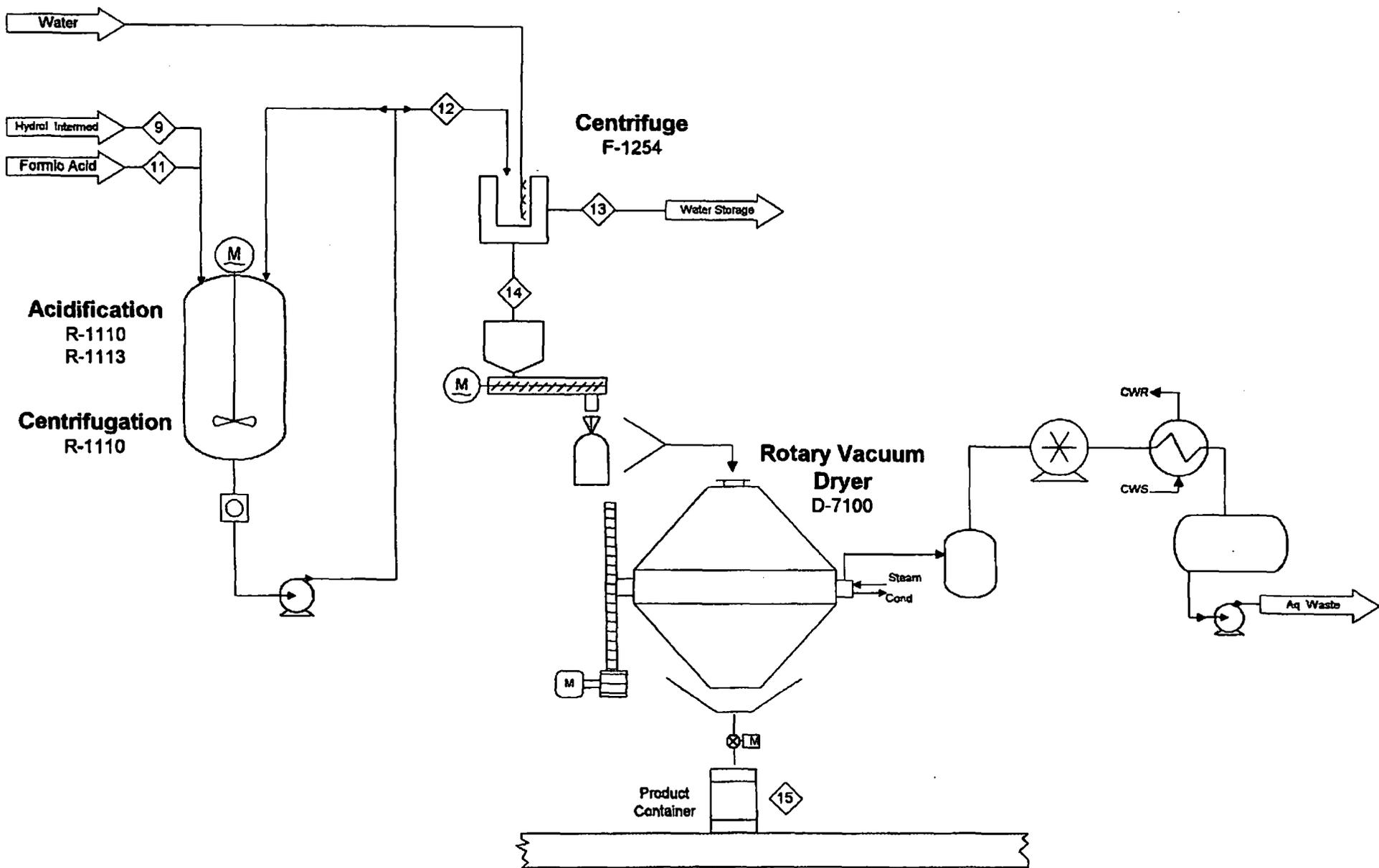
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	Drawn: DCG	Scale: None	Date: 02/26/00



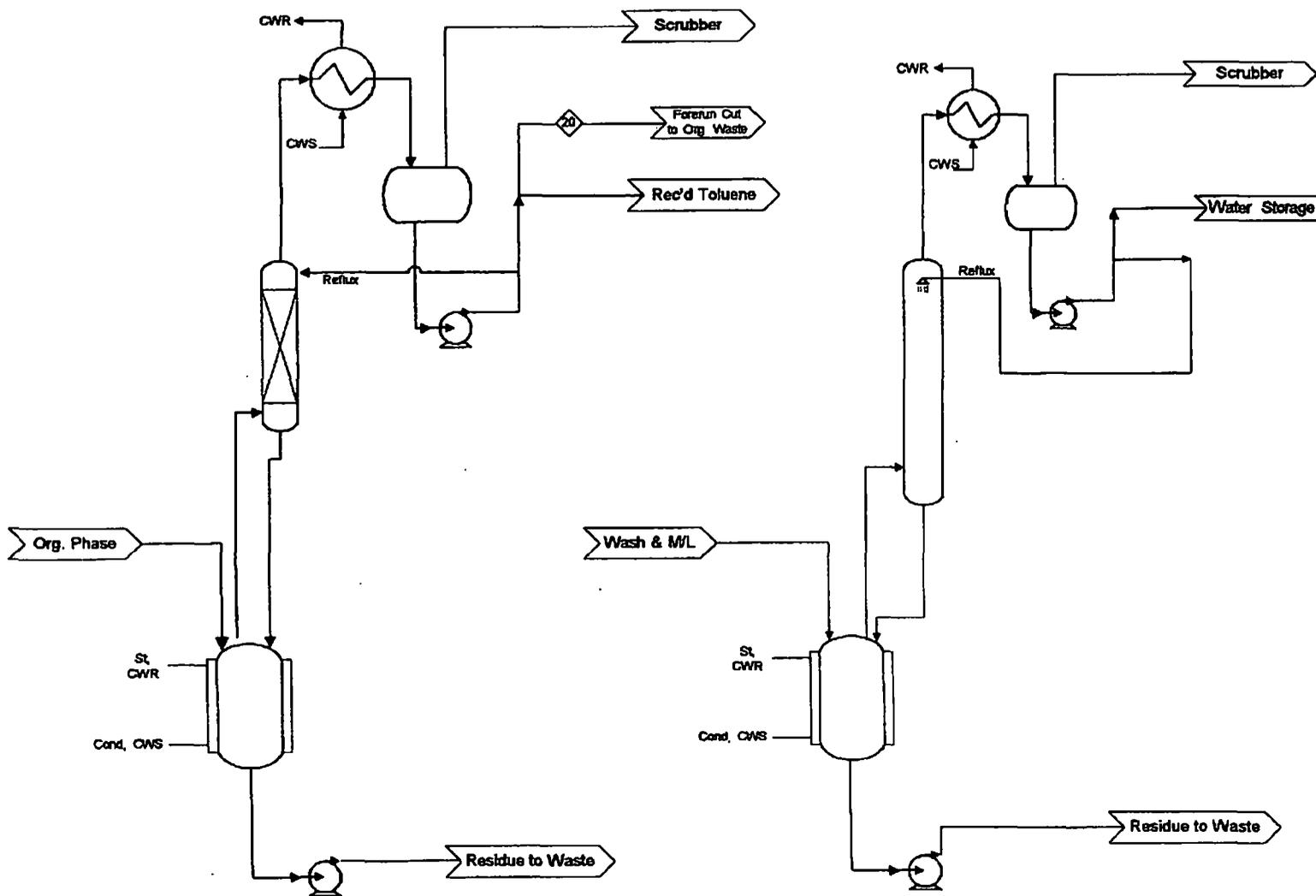
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	Drawn: DCG	Scale: None	Date: 02/26/00	Rev: B



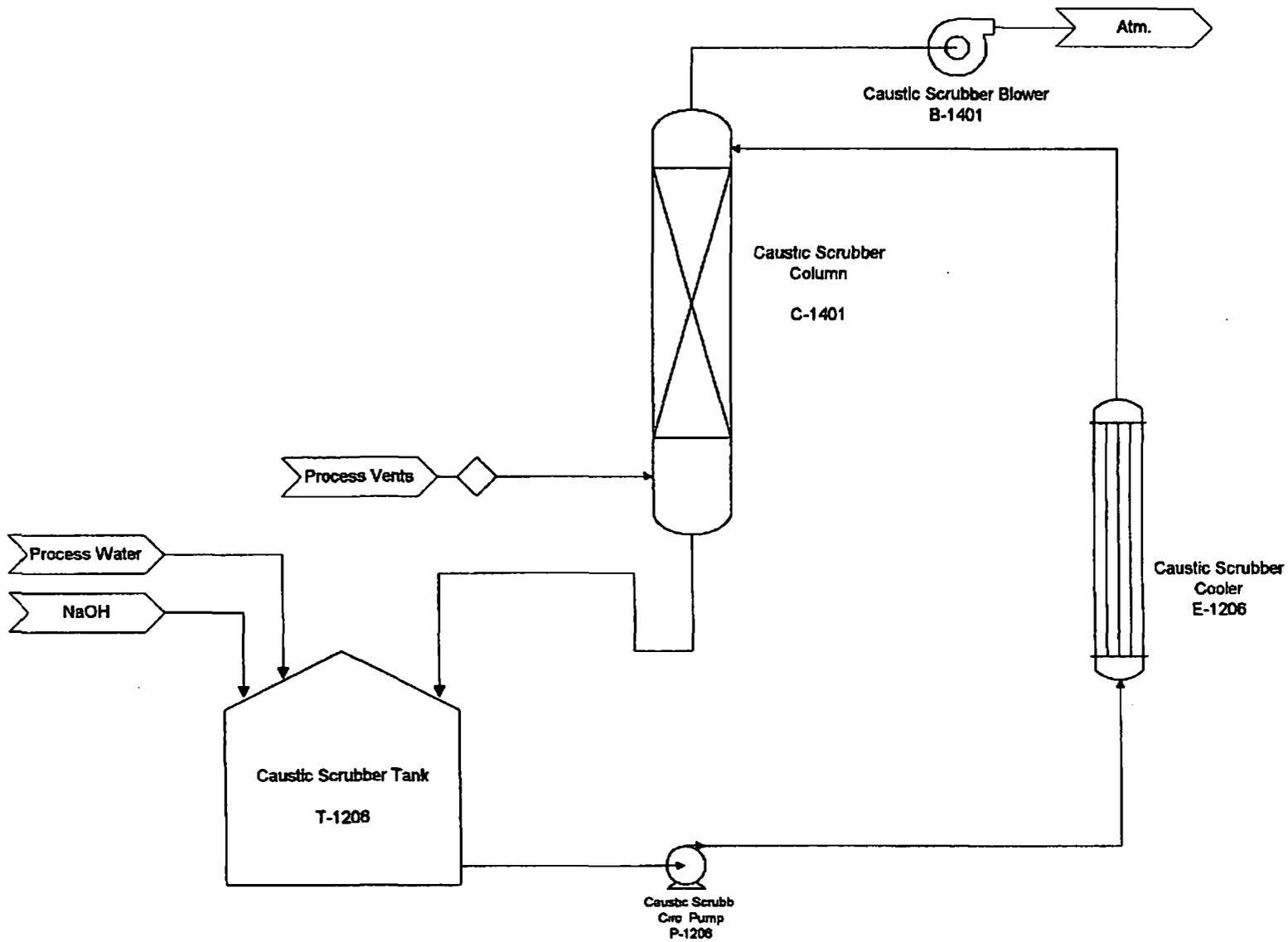
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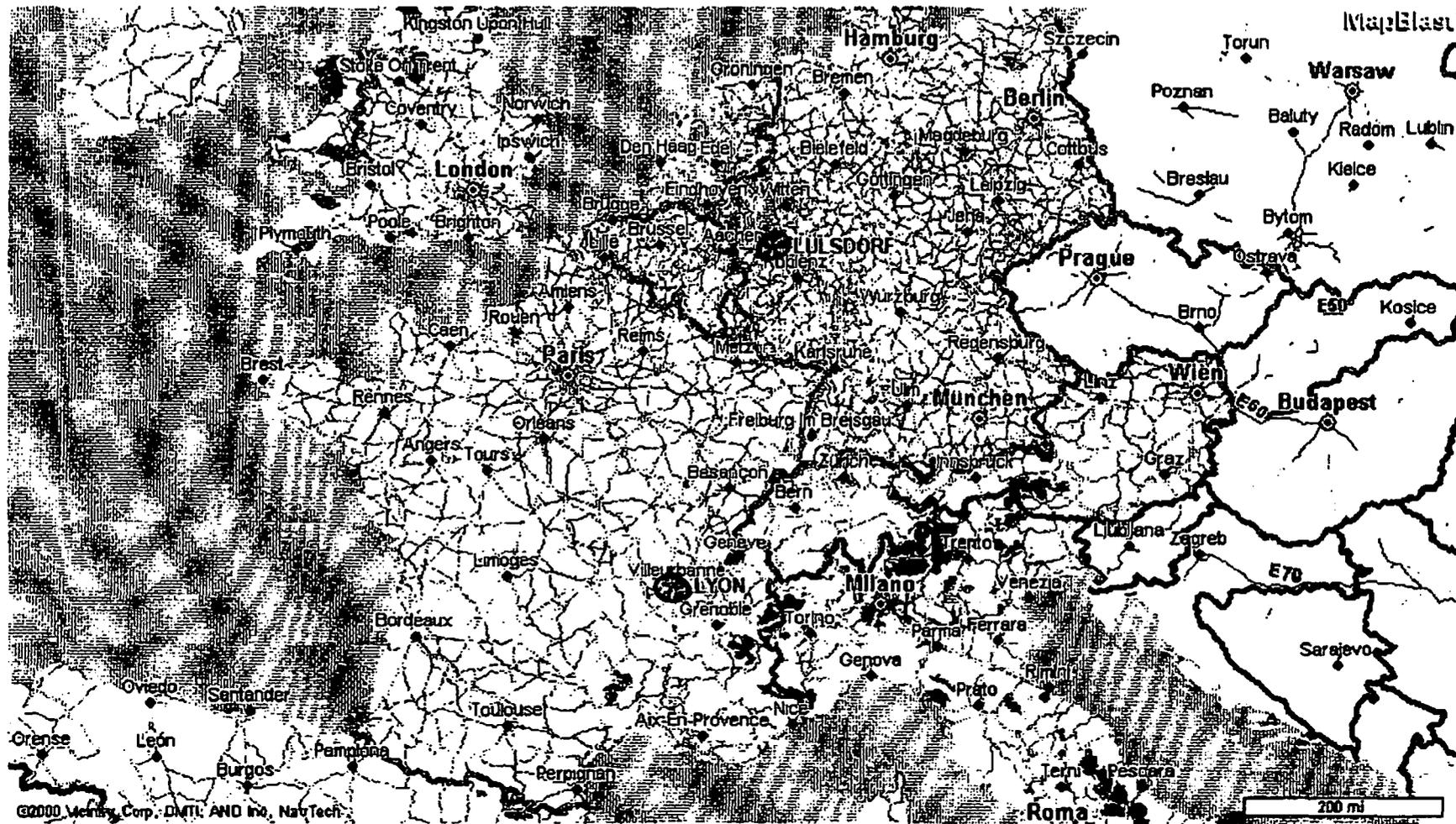
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	Title: Cyclanilide 90946 Process Flow Diagram Page 3 of 4 Pages		
	Drawn: DCG	Scale: None	Date: 02/26/00



	Title: Cyclanilide 90946 Process Flow Diagram Page 4 of 4 Pages		
	Drawn: DCG	Scale: None	Date: 02/26/00	Rev: B



COST ESTIMATE SUMMARY

PAGE 1 of 3

PROJECT: **CYCLANILIDE**

DATE: 25-Feb-00

PROJECT ENGINEER: **M. REINSAGER**

REV.

LABOR RATE \$35.00

	QTY	UNIT	UNIT MH	TOTAL MH	LABOR	MATERIAL	TOTAL
1.0 SITE WORK							
DEMOLITION	2	LOT	80.00	160	\$5,600.00	\$1,500.00	\$7,100.00
PAVING		SF					\$0.00
CONCRETE		YD	15.00	0	\$0.00	\$0.00	\$0.00
DRAINAGE		LOT	80.00	0	\$0.00	\$0.00	\$0.00
EARTHWORK		YD	15.00	0	\$0.00	\$0.00	\$0.00
SUBTOTAL				160	\$5,600.00	\$1,500.00	\$7,100.00
2.0 CIVIL							
FOUNDATIONS	10	LOT	40.00	400	\$14,000.00	\$5,000.00	\$19,000.00
STRUCTURAL (GALVANIZED)	30000	WT	0.04	1200	\$42,000.00	\$22,500.00	\$64,500.00
PIPE RACKS	10000	WT	0.08	750	\$26,250.00	\$7,500.00	\$33,750.00
STRUCTURAL PAINTING		FT^2	0.03	0	\$0.00	\$0.00	\$0.00
GRATING	2000	FT^2	0.20	400	\$14,000.00	\$20,000.00	\$34,000.00
SUBTOTAL				2750	\$96,250.00	\$55,000.00	\$151,250.00
3.0 REACTORS (COILED/JACKETED)							
300 GALLON GLASS		EA					\$0.00
500 GALLON GLASS		EA					\$0.00
1000 GALLON GLASS		EA					\$0.00
2000 GALLON GLASS		EA	35.00	0	\$0.00	\$0.00	\$0.00
3000 GALLON GLASS		EA	40.00	0	\$0.00	\$0.00	\$0.00
4000 GALLON GLASS		EA	40.00	0	\$0.00	\$0.00	\$0.00
COLUMN (10FT)	1	EA	120.00	120	\$4,200.00	\$7,000.00	\$11,200.00
COLUMNS (10 FT PACKED)	4	EA	80.00	320	\$11,200.00	\$80,000.00	\$91,200.00
RELOCATED VESSELS		EA	40.00	0	\$0.00	\$0.00	\$0.00
REACTOR SUPPORTS/STEEL	2	EA	110.00	220	\$7,700.00	\$3,000.00	\$10,700.00
REACTOR REPAIR/MODIFICATION		EA	110.00	0	\$0.00	\$0.00	\$0.00
VESSEL INSULATION		SF	0.70	0	\$0.00	\$0.00	\$0.00
SUBTOTAL				660	\$23,100.00	\$90,000.00	\$113,100.00
4.0 VESSELS/TANKS							
VESSEL REPAIRS		EA	25.00	0	\$0.00	\$0.00	\$0.00
HOPPER SS		EA	40.00	0	\$0.00	\$0.00	\$0.00
VESSEL GLASS (2000 GAL)		EA	60.00	0	\$0.00	\$0.00	\$0.00
VESSEL GLASS (8000 GAL)		EA	60.00	0	\$0.00	\$0.00	\$0.00
VESSEL GLASS (8000 GAL)		EA	60.00	0	\$0.00	\$0.00	\$0.00
VESSEL, FURAN (15000 GAL)		EA	60.00	0	\$0.00	\$0.00	\$0.00
VESSEL, FURAN (12000 GAL)		EA	60.00	0	\$0.00	\$0.00	\$0.00
VESSEL, FURAN (6000 GAL)		EA	60.00	0	\$0.00	\$0.00	\$0.00
API, SS (12000 GAL)		EA	60.00	0	\$0.00	\$0.00	\$0.00
API, SS (16000 GAL)		EA	80.00	0	\$0.00	\$0.00	\$0.00
API, SS (1500 GAL)		EA	60.00	0	\$0.00	\$0.00	\$0.00
MOLE SEIVE	1	EA	60.00	60	\$2,100.00	\$8,000.00	\$10,100.00
VESSEL, SS (400 GAL)	5	EA	80.00	400	\$14,000.00	\$35,000.00	\$49,000.00
VESSEL, SS (1500 GAL)		EA	80.00	0	\$0.00	\$0.00	\$0.00
VESSEL, SS (5000 GAL)		EA	80.00	0	\$0.00	\$0.00	\$0.00
VESSEL INSULATION		SF	0.70	0	\$0.00	\$0.00	\$0.00
SUBTOTAL				460	\$16,100.00	\$43,000.00	\$59,100.00

COST ESTIMATE SUMMARY

PROJECT: CYCLANILIDE

DATE: 25-Feb-00

PROJECT ENGINEER: M. REINSAGER

REV

LABOR RATE: \$32.00

	QTY	UNIT	UNIT MH	TOTAL MH	LABOR	MATERIAL	TOTAL
6.0 HEAT EXCHANGERS							
CARBATE (50 FT^2)		EA	50.00	0	\$0.00	\$0.00	\$0.00
CARBATE, TFE IMP. (100 FT^2)		EA	50.00	0	\$0.00	\$0.00	\$0.00
CARBATE (200 FT^2)		EA	50.00	0	\$0.00	\$0.00	\$0.00
CARBATE, TFE IMP. (500 FT^2)		EA	50.00	0	\$0.00	\$0.00	\$0.00
CARBATE (1000 FT^2)		EA	60.00	0	\$0.00	\$0.00	\$0.00
TUBE/SHELL, HAST, (1000 FT^2)		EA	60.00	0	\$0.00	\$0.00	\$0.00
TUBE/SHELL, SS (50 FT^2)		EA	50.00	0	\$0.00	\$0.00	\$0.00
TUBE/SHELL, SS (350 FT^2)	4	EA	60.00	240	\$8,400.00	\$32,000.00	\$40,400.00
TUBE/SHELL, SS (600 FT^2)		EA	50.00	0	\$0.00	\$0.00	\$0.00
COOLING TOWERS		EA	350.00	0	\$0.00	\$0.00	\$0.00
CL2 VAPORIZER		EA	60.00	0	\$0.00	\$0.00	\$0.00
SUBTOTAL				240	\$8,400.00	\$32,000.00	\$40,400.00
6.0 ROTATING EQUIPMENT							
PUMPS (50 GPM)	4	EA	160.00	640	\$22,400.00	\$36,000.00	\$58,400.00
PUMPS (350 GPM)	3	EA	40.00	120	\$4,200.00	\$36,000.00	\$40,200.00
PUMPS (100 GPM), TFE LINED		EA	40.00	0	\$0.00	\$0.00	\$0.00
BLOWER		EA					\$0.00
SCREW CONVEYOR	1	EA	80.00	80	\$2,800.00	\$5,000.00	\$7,800.00
VAC PUMP, AUTO SS		EA	80.00	0	\$0.00	\$0.00	\$0.00
NAUTA DRYER	2	EA	80.00	160	\$5,600.00	\$110,000.00	\$115,600.00
AGITATOR - HAST-C		EA	80.00	0	\$0.00	\$0.00	\$0.00
SUBTOTAL				1000	\$35,000.00	\$187,000.00	\$222,000.00
7.0 FILTERING EQUIPMENT							
CARTRIDGE FILTER		EA	20.00	0	\$0.00	\$0.00	\$0.00
CARTRIDGE		EA					\$0.00
FUNDA (105 FT^2)		EA	60.00	0	\$0.00	\$0.00	\$0.00
CENTRIFUGE - BASKET (HAST-C)		EA	120.00	0	\$0.00	\$0.00	\$0.00
SUBTOTAL				0	\$0.00	\$0.00	\$0.00
8.0 PIPING							
PIPING (1-2 IN), TFE/CS		LF	1.40	0	\$0.00	\$0.00	\$0.00
PIPING (3-6 IN), TFE/CS		LF	1.70	0	\$0.00	\$0.00	\$0.00
PIPING (8-12 IN), SS		LF	2.70	0	\$0.00	\$0.00	\$0.00
PIPING (.5- 75 IN), SS		LF	0.70	0	\$0.00	\$0.00	\$0.00
PIPING (1-2 IN), SS	2000	LF	1.20	2400	\$84,000.00	\$26,000.00	\$110,000.00
PIPING (3-6 IN), SS	150	LF	2.50	375	\$13,125.00	\$3,300.00	\$16,425.00
PIPING (4-6 IN), CS		LF	1.50	0	\$0.00	\$0.00	\$0.00
PIPING (.5-.75 IN), CS	300	LF	0.70	210	\$7,350.00	\$1,800.00	\$9,150.00
PIPING (1-2 IN), CS	200	LF	1.00	200	\$7,000.00	\$1,400.00	\$8,400.00
PIPING (2-4 IN), FIBERCAST		LF	2.00	0	\$0.00	\$0.00	\$0.00
VALVES - TFE LINED (3/4-1 IN)		EA		0	\$0.00	\$0.00	\$0.00
VALVES - TFE LINED (1-2 IN)		EA		0	\$0.00	\$0.00	\$0.00
VALVES - TFE LINED (3-6 IN)		EA		0	\$0.00	\$0.00	\$0.00
VALVES - CS (.75 IN)	40	EA		0	\$0.00	\$4,000.00	\$4,000.00
VALVES - CS (1-2 IN)	20	EA		0	\$0.00	\$3,000.00	\$3,000.00
VALVES - CS (3-6 IN)		EA		0	\$0.00	\$0.00	\$0.00
VALVES - SS (3-6 IN)	4	EA		0	\$0.00	\$2,400.00	\$2,400.00
VALVES - EXOTIC		EA		0	\$0.00	\$0.00	\$0.00

COST ESTIMATE SUMMARY

PAGE 3 of 3

PROJECT: CYCLANILIDE

DATE 25-Feb-00

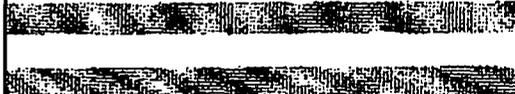
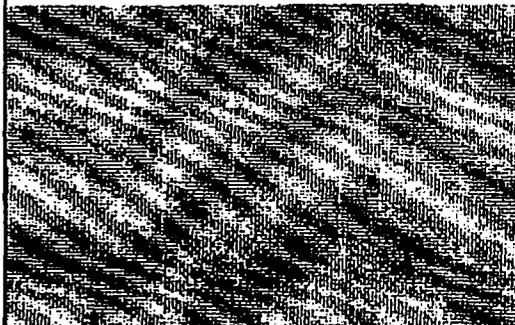
PROJECT ENGINEER M REINSAGER

REV

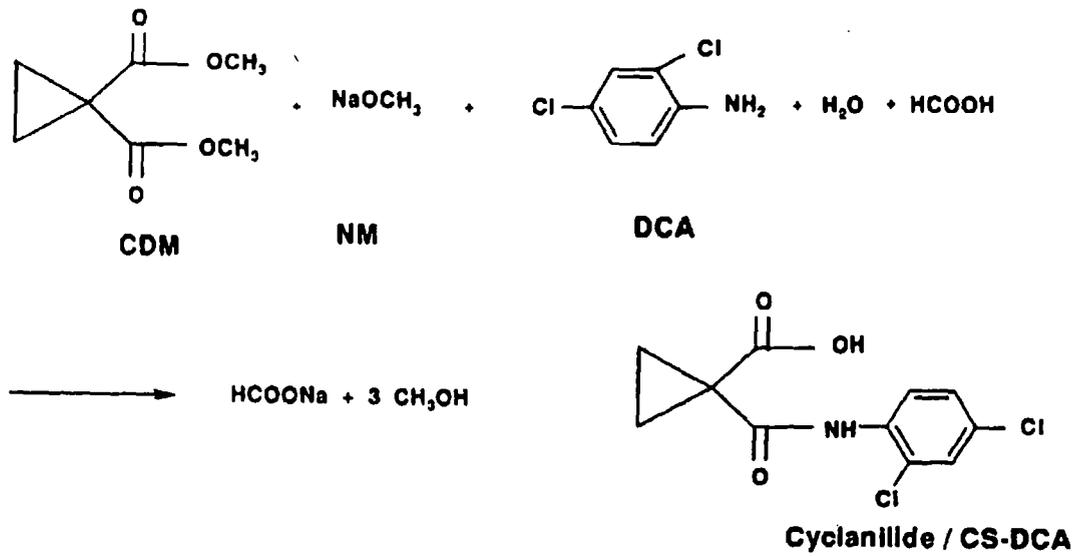
LABOR RATE \$32 00

	QTY	UNIT	UNIT MH	TOTAL MH	LABOR	MATERIAL	TOTAL
VALVES - SS (1-2 IN)	32	EA		0	\$0 00	\$8,000 00	\$8,000 00
VALVES - SS (4-6 IN)		EA		0	\$0 00	\$0 00	\$0 00
FITTINGS, TFE (1-2 IN)		EA		0	\$0 00	\$0 00	\$0 00
FITTINGS, TFE (3-6 IN)		EA		0	\$0 00	\$0 00	\$0 00
INSULATION (2-4 IN)	100	LF	0 40	40	\$1,400 00	\$1,000 00	\$2,400 00
PAINTING		LF	0 20	0	\$0 00	\$0 00	\$0 00
PSV		EA	5 00	0	\$0 00	\$0 00	\$0 00
RUPTURE DISC		EA	5 00	0	\$0 00	\$0 00	\$0 00
STEAM TRACING/INS	150	LF	0 50	75	\$2,825 00	\$1,200 00	\$3,825 00
PIPING MISC (HANGERS, ETC)	5	LOT	40 00	200	\$7,000 00	\$4,000 00	\$11,000 00
HOT WATER MIXER		LOT	20 00	0	\$0 00	\$0 00	\$0 00
SUBTOTAL				3500	\$122,500.00	\$56,100 00	\$178,600.00
9.0 ELECTRIC/INSTRUMENTATION							
SCALE	1	EA	20 00	20	\$700 00	\$2,500 00	\$3,200 00
MOTOR (20-40 HP)	7	EA	24 00	168	\$5,880 00	\$10,500 00	\$16,380 00
WIRING/CONDUIT/TRAY	700	LF	0 70	490	\$17,150 00	\$8,400 00	\$25,550 00
FLOW INST (MICRO-MOTION)	4	EA	48 00	192	\$6,720 00	\$20,000 00	\$26,720 00
FLOW INSTRUMENTS		EA	10 00	0	\$0 00	\$0 00	\$0 00
PRESSURE INSTRUMENTS/CTRL		EA	50 00	0	\$0 00	\$0 00	\$0 00
LEVEL INSTRUMENTS	4	EA	42 00	168	\$5,880 00	\$6,000 00	\$11,880 00
GUAGES	10	EA	0 80	8	\$280 00	\$750 00	\$1,030 00
TEMP INDICATOR	5	EA	2 00	10	\$350 00	\$1,000 00	\$1,350 00
CONTROL VALVES	4	EA	24 00	96	\$3,360 00	\$8,000 00	\$11,360 00
PRESSURE REGULATORS	2	EA	8 00	16	\$560 00	\$1,000 00	\$1,560 00
CONTROLLERS	4	EA	12 00	48	\$1,680 00	\$3,200 00	\$4,880 00
INTERLOCKS (MINIMAL)	6	EA	10 00	60	\$2,100 00	\$1,800 00	\$3,900 00
DCS EQUIPMENT/CONFIGURATION		EA	120 00	0	\$0 00	\$0 00	\$0 00
CONTROL ROOM/MCC		EA	650 00	0	\$0 00	\$0 00	\$0 00
ELECTRICAL MISC	2	LOT	120 00	240	\$8,400 00	\$4,000 00	\$12,400 00
SWITCHES	6	EA	10 00	60	\$2,100 00	\$1,200 00	\$3,300 00
SUBTOTAL				1576	\$55,160.00	\$68,350 00	\$123,510.00
10.0 INSPECTION/ENGINEERING							
VESSEL INSPECTIONS		EA			\$0 00		\$0 00
ENGINEERING/DCS CONFIG	15	LOT	40 00	600	\$21,000 00		\$21,000 00
DRAFTING/DESIGN	20	LOT	40 00	800	\$28,000 00		\$28,000 00
SUBTOTAL				1400	\$49,000.00	\$0.00	\$49,000.00
11.0 RENTALS							
CRANE	3	LOT				\$4,500 00	\$4,500 00
EQUIPMENT		LOT				\$0 00	\$0 00
FREIGHT (ALL ABOVE)	6	LOT				\$9,000 00	\$9,000 00
12.0 MISCELLANEOUS							
LAB EQUIPMENT		LOT				\$0 00	\$0 00
SUBTOTAL						\$9,000.00	\$9,000.00
SUBTOTAL				11746	\$411,110.00	\$541,950.00	\$953,060.00
OVERTIME (50%)							
CONTINGENCY (40%)					\$164,444.00	\$216,780.00	\$381,224.00
TOTAL					\$575,554.00	\$758,730.00	\$1,334,284.00

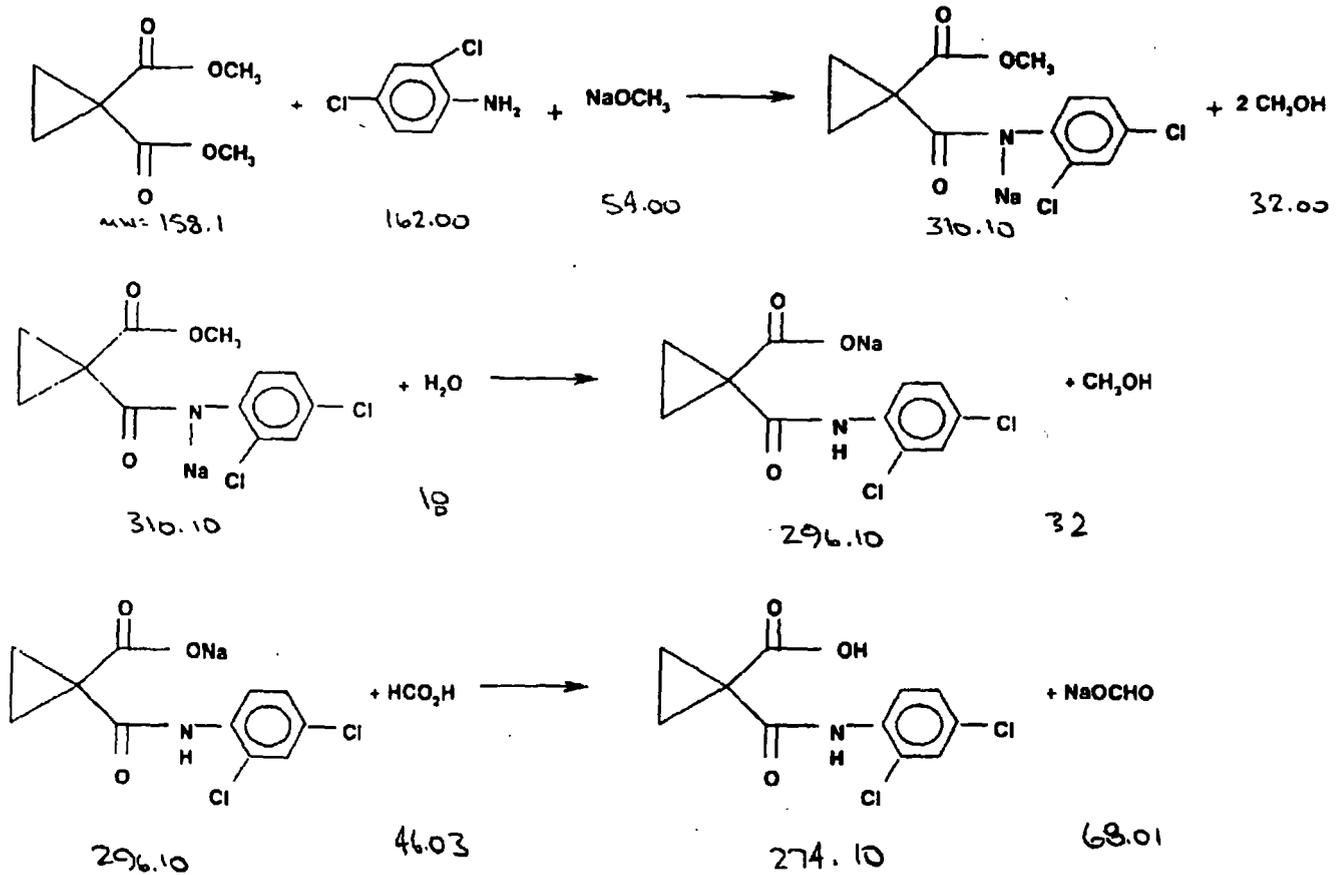
Rhone-Poulenc RPA 90946 (Cyclanilide)
Major Equipment Identification

<u>Service</u>	<u>Equip. No.</u>	<u>Train A</u>		<u>Capacity</u>	<u>Train B</u>	
		<u>MOC</u>	<u>MOC</u>		<u>MOC</u>	<u>Capacity</u>
<u>Premix System</u>						
Tank	R-1102	GLS		1500 gal	R-1104	GLS 1500 gal
Agitator	A-1102	GLS		10 hp	A-1104	GLS 10 hp
Transfer Pump	P-1102B	Alloy D20		70 gpm @ 80'	P-1104B	Alloy D20 50 gpm @ 56'
<u>Coupling System</u>						
Reactor <i>REACT PUMP</i>	R-1106	GLS		3000 gal	R-1107	GLS 3000 gal
Column	C- (NEW)	316 SS		<u>TBD</u>	C- (NEW)	316 SS <u>TBD</u>
<i>REACT PUMP</i> Pump	P- (NEW)	316 SS		<u>TBD</u>	P- (NEW)	316 SS <u>TBD</u>
<u>Hydrolysis and Acidification</u>						
Reactor <i>REACT PUMP</i>	R-1109	Hast-C 22		4000 gal	R-1111	GLS 3000 gal
Agitator	A-1109	Hast-C 276		20 hp	A-1111	GLS 20 hp
Column	C- (NEW)	316 SS		<u>TBD</u>	C- (NEW)	316 SS <u>TBD</u>
<i>REACT PUMP</i> Pump	P-1109	PFA Lined St		300 gpm @ 94'	P- (NEW)	316 SS <u>TBD</u>
<u>Centrifugation</u>						
Feed Tank	R-1110	GLS		4000 gal		
Feed Tank Agitator	A-1110	GLS		10 hp		
Feed Pump	P-1110	316 SS		150 gpm @ 73'		
Centrifuge	F-1254	Hast-C		48"x30" P/B		
<u>Dryer</u>	D-7100	304 SS		7 cu. Meter		
Scrubber <i>DRYER REACT COND REACT PUMP</i>	C-1401	CS/FRP		N/A		
<u>Toluene Recovery</u>						
Still Pot	R-1112	GLS		2000 gal.		
Still Pot Pump	P- (NEW)	316 SS				
Column	C-1412	GLS		2' d x 32' P/H		
Primary Condenser	E-1412A	316 SS		141 sq. ft		
Secondary Condenser	E-1412B	316 SS		47 sq. ft.		
Receiver	V-1312	316 SS		1000 gal.		
Receiver Pump	P-1312	Alloy D4		25 gpm @ 55'		
Rcvd Tol Storage Tank	T-1222	316 SS		12900 gal.		
Rcvd Tol Storage Pump	P-1222	Alloy D4		75 gpm @ 72'		
<u>Water Recovery</u>						
Still Pot						
Column						
Condenser						
Receiver						

Overall equation:

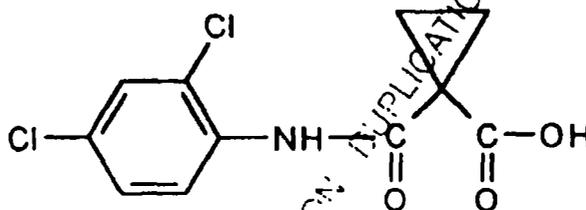


Single steps:



CYCLANILIDE RPA 90946 - MERIT NOTE

N° : 322/96/118 Rév. : 0
Clas. : CP/MMA/JLV/ct
Emet. : J. LAVOREL
Date : 18/03/96 Page : 1/10



$C_9H_9Cl_2NO_2$

MW = 274,1

MERIT NOTE

Author : J. LAVOREL

Date : 19-03-96

TABLE OF CONTENTS

1. **Process Principle** **3**

2. **Chemical equations** **3**

3. **Raw materials specifications** **4**

4. **RPA 90946 final product specifications** **5**

5. **Process description** **6**

5.1 **Synthesis of CPMPA : coupling reaction** **6**

5.1.1 **Process diagram** **6**

5.1.2 **Reaction principle** **6**

5.1.3 **Equipment** **6**

5.1.4 **Loads** **7**

5.1.5 **Operating conditions** **7**

5.2 **Hydrolysis** **7**

5.2.1 **Process diagram** **7**

5.2.2 **Reaction principle** **8**

5.2.3 **Equipment** **8**

5.2.4 **Loads** **8**

5.2.5 **Operating conditions** **8**

5.3 **Acidification** **9**

5.3.1 **Process diagram** **9**

5.3.2 **Reaction principle** **9**

5.3.3 **Equipment** **9**

5.3.4 **Loads** **10**

5.3.5 **Operating conditions** **10**

6. **Results** **10**

PROPRIÉTÉ DE RHÔNE-POULENC INDUSTRIALISATION
DUPLICATION INTERDITE AUX DESTINATAIRES

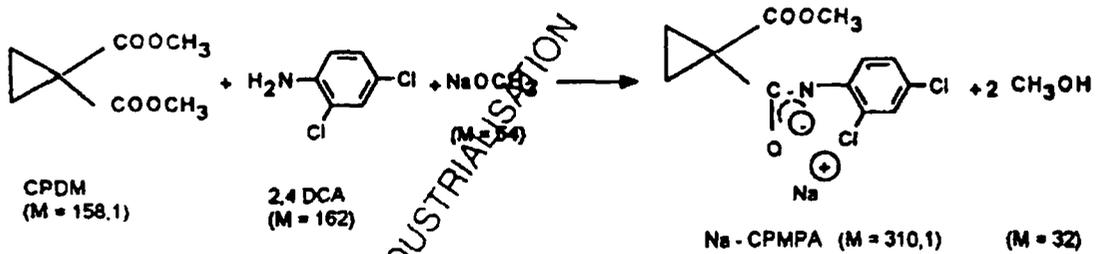
1. Process Principle

RPA 90946 is produced by a three step integrated batch process from 2,4-dichloroaniline and cyclopropane dicarboxylic methyl ester. After filtration the technical product is isolated as a white solid with a purity of $\geq 98,5\%$.

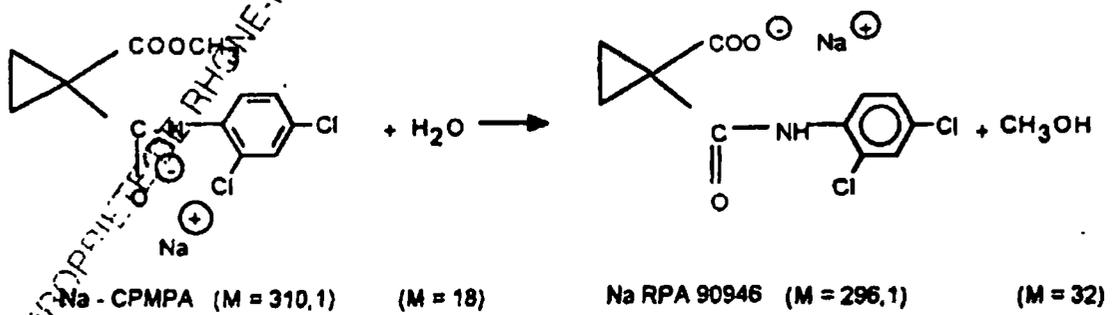
2. Chemical equations

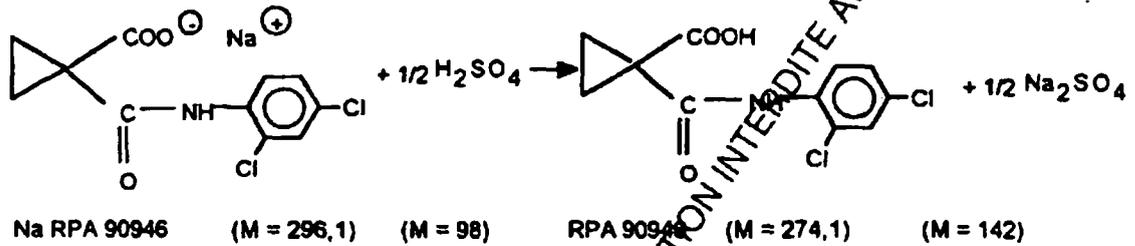
Flow Chart of Chemical Equations for RPA 90946

Step I: Coupling



Step II: Hydrolysis



Step III : Acidification

3. Raw materials specifications

N°	Chemical name or abbreviation	Molecular weight	Purity specifications		Impurities specifications	
			Minimum (% w/w)	Typical (% w/w)	Impurities	Maximum (% w/w)
1	toluene	92.14	99.00	99.50	Organic impurities Water	0.50 0.03
2	2,4-dichloroaniline	162.02	97.00	99.10	WOODZ isomers	500 - 1000 1.00
3	Sodium methoxide 30 % w/w methanol solution	54.03	29.5	30.0	NaOH	0.5
4	cyclopropane dimethyl carboxylate	158.10	97.0	99.0	Organic impurities	1.0
5	sodium hydroxyde	40.00	98.00	99.50	Na ₂ CO ₃ Chloride Sulfate	1.00 0.01 0.01
6	water	18.01	99.00	99.90	salts	1.00
7	sulfuric acid	98.08	95.00	97.00	Water	4.00

4. RPA 90946 final product specifications

N°	Component In Technical product	C.A.S. Number registered	Content (%) min	Content (%) max	Content (%) min	Purpose of Formulation
1	-1-(2,4-dichlorophenyl aminocarbonyl)- cyclopropane carboxylic acid	113136-77-9	98,5	100	98	A.I.
2	Water	7732-18-5	0,2	0,5	0	Rx. Solvent
3	Toluene <i>0.1% max</i>	108-88-3	0,2	1,0	0	Rx. Solvent
4	1-(2,5-dichlorophenyl aminocarbonyl)- cyclopropane carboxylic acid	113136-76-8	0,2	1,0	0	Rx. Imp.
5	Impurity A		0,2	0,3	0	Rx. Imp.
6	N,N'-bis-(2,4 dichlorophenyl) 1,1- cyclopropane dicarboxamide		0,3	1,5	0	Rx. Imp.
7	3-(2,4-dichlorophenyl amino carbonyl) propyl 1- (2,4 dichloro phenyl amino carbonyl) -1 cyclopropane carboxylate		0,4	1,5	0	Rx. Imp.
8	2,4-dichloroaniline	554-00-7		0,1		Rx. Imp.
9	1-(2,4-dichloro phenyl amino carbonyl)- cyclopropane carboxylic acid methyl ester					Rx. imp.
10	1-(3,4-dichlorophenyl amino carbonyl) cyclopropane carboxylic acid	113136-91-7		0,1 0,1		Rx. Imp.

(1) C.A.S. : Chemical Abstract Service

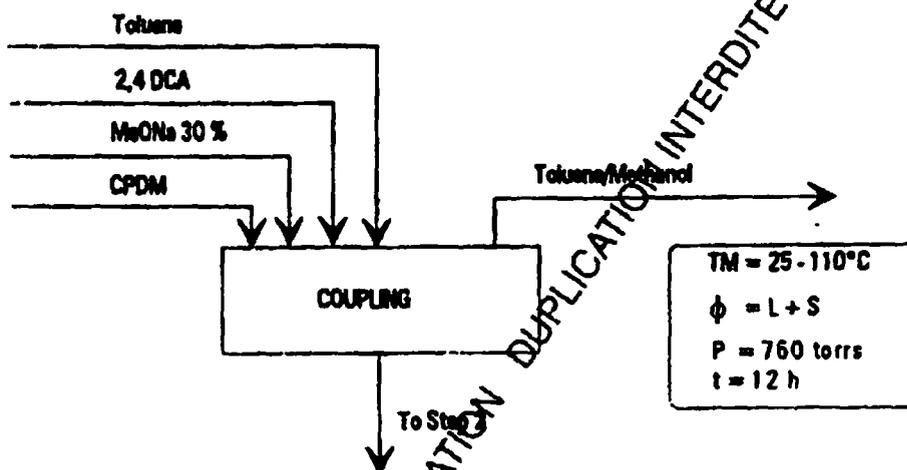
(2) Purpose definitions : A.I. : Active Ingredient; Rx. Imp. : Reaction Impurity

(3) % by weight is based upon the combination of the validated analytical methods for the analysis of the representative batches, as outlined in separate submission to satisfy SERIES 62 requirements.

5. Process description

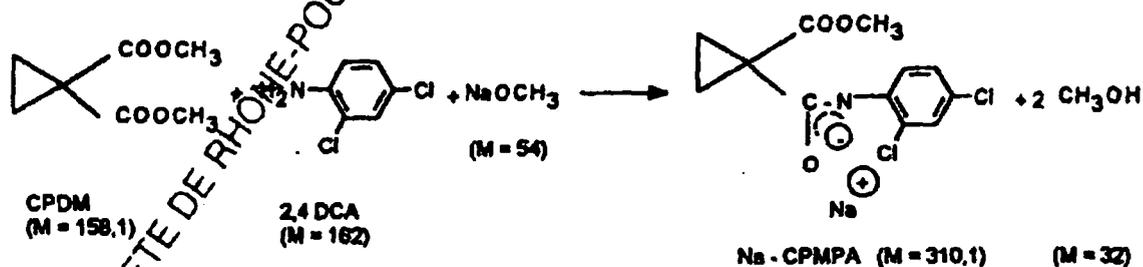
5.1 Synthesis of CPMPA : coupling reaction

5.1.1 Process diagram



5.1.2 Reaction principle

Na-CPMPA is obtained by condensation of CPDM with the Na-salt of 2,4 dichloroaniline in presence of toluene. The Na-Dichloroaniline salt is prepared in situ by reaction of Na-methylate. Complete reaction of CPDM needs a distillation of MeOH which is added with MeONa, and MeOH which is liberated during the reaction.



5.1.3 Equipement

- Glass lined reactor fitted with agitator = impeller type
- Dosing vessel for solids introduction
- Dosing tank
- Distillation column 

5.1.4 Loads

Product	NW g	Moles	Weight g	Volume ml
Toluene	92,14	14,9	1373	1800
2-4-DCA assay 99,4 %	162,02	1	163	
Methylate de Na 30 %				
Methanol solution	54,03	1,095	67,3	
CPDM assay 98,5 %	158,1	0,98	157,4	

5.1.5 Operating conditions

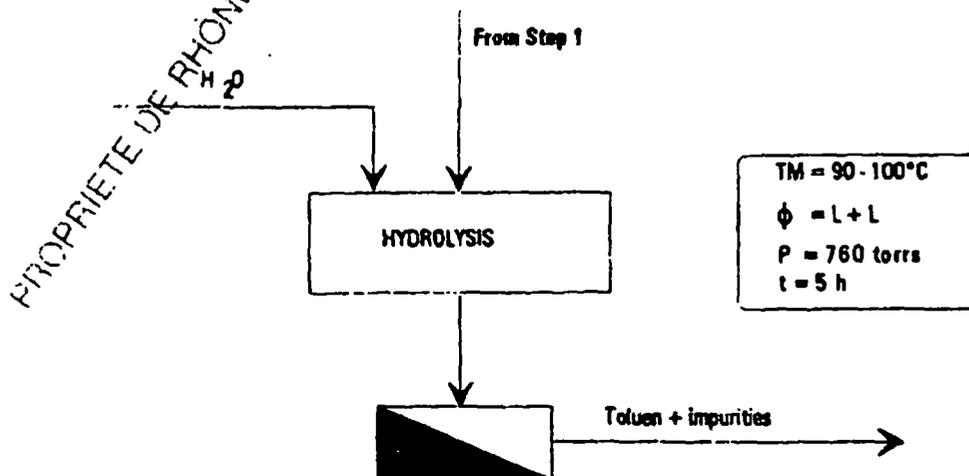
The reactor is charged with anhydrous toluene, then with 2,4 dichloro aniline, under nitrogen flow at 25°C.

When 2,4 dichloroaniline is entirely dissolved, Na methylate solution is added at 25°C.

Methanol is removed by azeotropic distillation (70 % MeOH - 30 % toluene) at 64°C. Total removing of methanol needs to reach a mass temperature of 110°C.

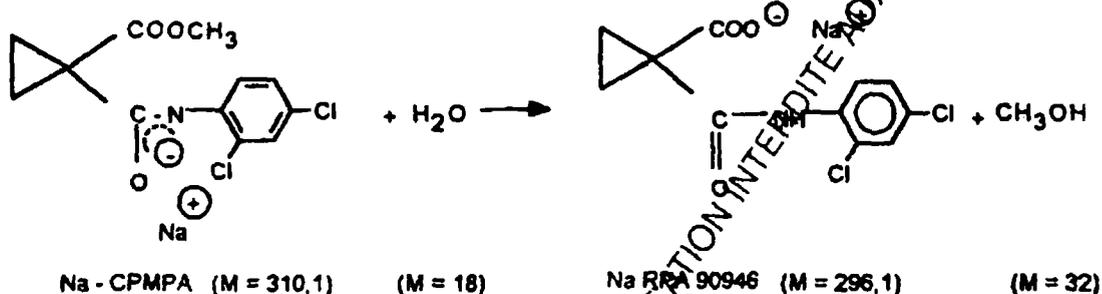
After cooling the reaction mixture down to 20°C, CPDM is added (2 hours addition time) at 20°C.

Methanol generated during the reaction is distilled off at 25°C under vacuum. Complete reaction needs a final temperature of 110°C. Na-CPMPA precipitates in the toluene suspension.

5.2 Hydrolysis
5.2.1 Process diagram


5.2.2 Reaction principle

Water is added to the NaCPMPA suspension. The Na Salt of RPA 90946 formed is dissolved into the aqueous phase.


5.2.3 Equipment

Glass lined reactor equipped for phase separation and fitted with a distillation column.

5.2.4 Loads

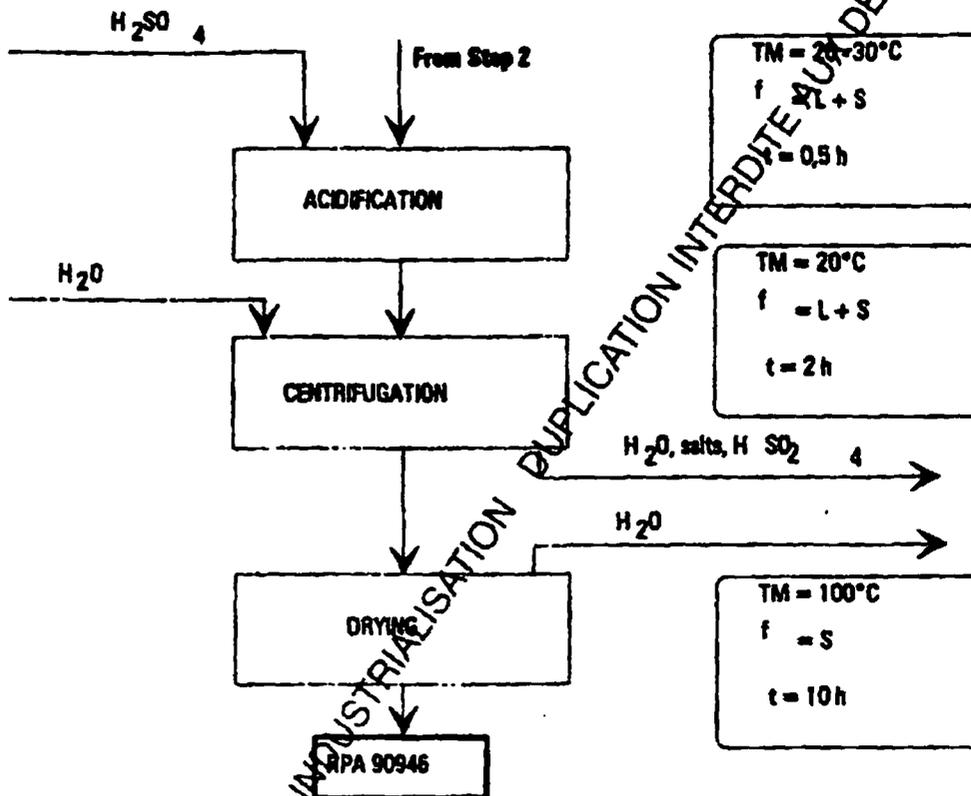
Product	Mass g	Moles	Weight g	Volume cm ³
Sodium Hydroxyde	40	0,81	32,6	
Water	18,01	88,8	1800	1600

5.2.5 Operating conditions

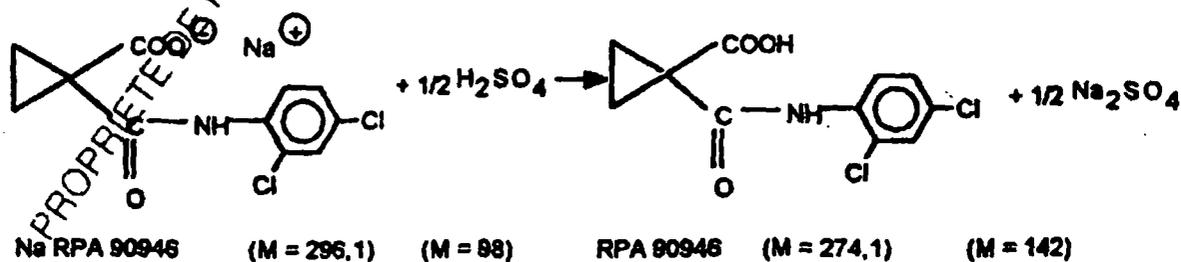
Water is added in large excess (60 moles/mole of Na-CPMPA) on the Na-CPMPA toluene suspension. Complete hydrolysis of the ester group is obtained by distilling off the methanol (duration 3 hours - T_{max} = 100°C).

After cooling to 20°C, the aqueous phase containing Na Salt of 90946 is separated by decantation from the organic phase and transferred into the acidification reactor.

Organic phase contains 2,4 DCA and Impurity n° 6 (this Impurity results from a non selective reaction of 2,4 DCA on CPDM at the step 1 ; the second ester group reacts with 2,4 DCA).

5.3 Acidification
5.3.1 Process diagram

5.3.2 Reaction principle

RPA 90946 is precipitated by acidification of the aqueous solution of Na RPA 90946. Crystals of RPA 90946 are separated by centrifugation, washed and dried.


5.3.3 Equipment

Glass lined reactor fitted with a pH probe.

5.3.4 Loads

Produit	Quantité	Unité	Notes
H ₂ SO ₄ 96 %	98	0,95	98

5.3.5 Operating conditions

Sulfuric acid is added on the aqueous solution of RPA 90946 salt.

The temperature is kept to 20 - 30°C during acid introduction. RPA 90946 crystallization needs a strong agitation. Acid introduction is stopped when pH < 1,5.

The RPA 90946 is recovered by centrifugation of the aqueous suspension at 20°C. Crystals are washed with water. The wet cake is transferred to a dryer and dried at 100°C;

The dry technical RPA 90946 is stored in polyethylene-lined drums and kept in a clean room.

6. Results

Yield RPA 90946 / 2,4 DCA	92,5 %
Yield RPA 90946 / CPDM	94,0 %
Purity	98,4 %

Major impurities

RPA 090945	=	0,6 %
------------	---	-------

This impurity results from the reactions of 2,5 DCA with CPDM.

2,4 DCA	=	0,17 %
---------	---	--------

This impurity results from an incomplete reaction during step 1. It may be also formed during heating of Na CPMPA and Na RPA 90946 salts (step 1 and 2) by reverse reaction.

unknown impurity	=	0,15 %
------------------	---	--------

CEDAR INTERNAL CORRESPONDENCE

TO: Chris McGee
FROM: E. J. White
SUBJECT: **RP's Cycanillide Process**

DATE: September 23, 1998
COPY TO:

There is not enough information to look at this process in any detail. The following comments are offered:

STEP I: Coupling

- * Don't know anything about CPDM handling
- * 2,4 DCA will have to be melted and pumped into reactor. Drums or container?
- * I assume the NaOCH_3 is a solid, which would require solids handling equipment.
- * Methanol and toluene strip should be relatively simple, R-5104 (3000 SS) is the only vessel in unit 5 that would not require installation of a condenser.
- * How will the toluene and methanol stream be disposed of?

STEP II: Hydrolysis

- * Need a sight glass on bottom discharge for phase separation.
- * May use R-5103, transfer aqueous phase (bottom layer) to R-5105 (~~no~~^{yes} agitator), transfer the organic layer to storage. The aqueous layer can then be returned to R-5103 for step III.
- * How will the toluene and impurities stream be disposed of?

STEP III: Acidification

- * Use R-5103, need an acid addition line.

STEP III: Centrifugation

- * Assume our basket centrifuge will work.
- * Waste acid and salts may have to be shipped offsite depending on makeup.

STEP III: Drying

- * Need definition of drying requirements - may need a batch dryer.
- * Is the product temperature sensitive? Can the dryer temperature be elevated?
- * How is product packaged?

RP PROPOSES THIS PROCESS FOR CAPROLIN DUE TO NO SALT FORMATION - EASIER PROCESSING

XYLONE - STRIP @ 85 bar

TOLUENE - STRIP @ 250 bar

ATSD SOLVENT (XYL), 2,4-DCA, QDM → THEN
METER NaOCH₃

* AGITATOR DESIGN FOR CAPROLIN DUE TO PRECIPITATION
→ ANCHOR STYLE

HYDROLYSIS STRIP w/ XYLONE @ ATM PRESS. 200PS 93°C W/STRIP
OF 83°C → SIDE PRODUCTS

* MUST USE VACUUM TO MAINTAIN @ 83°C
* USE ONLY WATER FOR HYDROLYSIS - NO CAUSTIC

* USE FORMIC ACID FOR ACIDIFICATION

DCA Conversion	95%
Caprolin Yield	91%
SELECTIVITY	96%
Assay	98.5%

WASTES	CONCR	TOL	XYLONE	XYL w/NO MEDU
ORG:	1.845 kg/kg	1.64	1.29	0.29 kg/kg
AQ:	1.24 kg/kg	0.97	0.97	0.97

* O/H TEMP - T/O ONLY WHEN O/H < 70°C
- Pot Temp keep < (?) 83°C

2,4 DCA SHIPS IN DRUMS

"New" AVANTIS PROCESS DESCRIPTION

300 kg (TRAILER?)
200 kg 2,4 DCA

EMULSIONIC (-15°C)
[HEAT SOLV TO 35°C PRIOR TO START]

STIR 2 HOURS
(30 min)

↓
25-40°C

* DURUM NaOCH3 CHANGE MANTON BOTTOMS TEMP < 60°C

→ USE 25% NaOCH3 IN MESH FOR WASTE COSTS

* DURUM COLUMN DISTILLATION - BOTTOM TEMP MAX = 76°C

IF CUL OIL BACK TO REACTOR, DON'T NEED COLUMN STEP -
OIL GOES REACTOR MASS

* NEED TO CONFIRM CORROSION OK FOR GLS

* 5 THEOR. PLATES MAX FOR COLUMN DISTILLATION

* ANCHOR ACTINATOR FOR RXTR

* pH 13 - OK FOR GLASS?

Hydrolysis pot temp 83°C

→ MAY HAVE TO USE HET C VESSEL

Hydrolysis yield drops 1% / °C FROM 83°C → 90°C

→ ADD HMT @ 83°C HOLD FOR 3 HR - STOP NEXT @ VACUUM

⊗ RAG GOES W/OIL. LAYER AFTER HYDROLYSIS

- put Temperature H₂O into the H₂O source
- Add H₂O Heater the Pa into the EST.
- Add pH Loop to PyTR

PERFORMANCE

Conversion (DCS) 95%
 Yield 91%
 DEGISSA (?)

PROCESS

XYL v. Tol

5 Batches → Doc 62 → Doc 61
 (Proc Descrip)

Spec of Final prod - Can make better,
 Cannot increase quantities

op. process defined by MSK 00

**LAW OFFICES
APPERSON, CRUMP & MAXWELL, PLC**

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801 / 525-1711

FACSIMILE 801 / 521-0788

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WILLIAM R. METCALF, 1972-1980
JOHN W. APPERSON, 1980-1980

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*ALSO ADMITTED IN MISSISSIPPI
*ALSO ADMITTED IN DISTRICT OF COLUMBIA

*File
Caldwell* March 3, 2000

VIA FAX

Mr. Geoffrey L. Pratt
Vice President
Cedar Chemical Corporation
24th Floor, Clark Tower
5100 Poplar Avenue
Memphis, TN 38137

Re: Proposed Rhone-Poulenc Agreement

Dear Geoff:

Enclosed is a new version of the Memorandum of Understanding which incorporates some of the new concepts inserted in Rhone-Poulenc's draft, but reinserts many of the substantive provisions which Rhone-Poulenc deleted. The reinserted terms (some of which I have revised slightly from our initial draft) include:

- Except for the eighty (80) ton campaign to be initiated in the fourth quarter of the year 2000, production campaigns will be for no less than one hundred fifty (150) metric tons and there will be no more than one production campaign in each Contract Year.
- The cost of the Capital Improvements would be amortized, and effectively reimbursed by Rhone-Poulenc, over the initial four hundred twenty (420) metric tons of Product purchased by it, but in any event, twenty percent (20%) of the Capital Improvements must be reimbursed by the end of the First Contract Year and an additional forty percent (40%) by the end of the Second Contract Year and the balance by the end of the Third Contract Year.

APPERSON, CRUMP & MAXWELL, PLC

**Mr. Geoffrey L. Pratt
March 3, 2000
Page Two**

- **The toll fees will not be reduced by the amount of the "amortization fee" after four hundred twenty (420) metric tons have been purchased (a point that Rhone-Poulenc seems to be confused about).**
- **I pushed up the original deadlines under Article 3 to March 15, 2000.**
- **Any Capital Improvement costs incurred by Cedar following execution of the Memorandum of Understanding are for Rhone-Poulenc's account.**

I could underscore the clauses which we either reinserted or, otherwise, revised which represent the principal difference between Rhone-Poulenc's latest draft and the enclosure. I would suggest, however, that you submit a clean draft and describe the principal differences in your letter that accompanies the draft.

Sincerely yours,



Allen T. Malone



**ATM:cs
Enclosure**



CONFIDENTIAL

File

To: ~~Serge Ravet~~ Fax: 9-011-33-4-72-85-2066

From: Geoff Pratt Date: 03/07/00

Re: MOU Cyclanilide Pages: 11

Phone: 901-684-5373 Cc: Randal Tomblin

Joe Mancini

Chris McGee

Allen Malone

Urgent For Review Please Comment Please Reply Please Recycle

Dear Serge,

Following comments on your fax of February 11, 2000 regarding the Cyclanilide MOU:

Your proposal is acceptable for all paragraphs up to and including article 2A. We note that you have extended the term from 3 years to roughly 3.5 years but this probably will not affect the timing of revenue to Cedar significantly.

In articles 2A, B, C, F, I and 3B you have changed the business terms significantly, all to your advantage. The business terms were clearly defined and agreed to in our meeting of October 13, 1999. At that time Cedar compromised between our normal and reasonable charges in the spirit of meeting your cost requirements. Your latest proposed language requires Cedar to invest over 1 million dollars and reserve our plant for you with no commitment from Aventis for quantity of product or timing. I do not believe that you would agree to such a proposal if our roles were reversed. Let us please get back to the original business agreement so that project can move forward.

Cedar Chemical Corporation

[Redacted signature area]

I would remind you of the basis for our original agreement:

Cedar's economics are based upon your statement that volumes would be 80MT in year 1, 160MT in year 2, 180MT in year 3.

Cedar's pricing is: \$8.00/kg for the first campaign, which is expected to be 80MT, \$7 / kg for subsequent campaigns between 150-200 MT, and \$6.5 / kg for campaigns over 200 MT. These campaign lengths were priced in response to your request. These campaigns are to be continuous. If you anticipate that campaigns will be shorter then Cedar will estimate pricing for shorter campaigns.

Let us assume that Cedar spends funds for detailed design of the plant modifications and for the additional equipment required. If Aventis cancels the project for any reason Cedar will have to absorb the cost with no hope of return. We are prepared to absorb as the cost of doing business, expenditures associated with the generation of business, and preparing preliminary design packages and quotations. Expenditures for detailed engineering and equipment, which need to begin soon, will not begin if you cannot agree to cover costs if the project is stoppage is terminated by Aventis prior to startup.

After startup Cedar can earn a reasonable return on the capital investment only if Aventis takes the 420MT that you told us you wanted. All of the economics were based on the volume and timing projection provided by you. However, we recognizes that you cannot predict the future and Cedar is prepared to share the risk by not requiring a take or pay contract for the product. We must partially protect ourselves by requiring that the capital cost be returned to us if, for no fault of Cedar's, less than the amount of product upon which the economics were based is purchased. We use the amortization method to accomplish this. We divide the capital cost by the number of product units upon which the economics are based, in this case 420,000kgs.

Aventis will pay amortization only on the difference between the amount of product you take and 420MT. The last sentence of article 2C provides insufficient protection for Cedar. If you take very little product in the previous contract years Cedar would have to wait over three years to get most of the capital returned.

Your assumption that the fees will be reduced by the amortization amount when the 420 MT is taken is not valid. The fees do not include the amortization amount. If they did Cedar would show no profit on the project. The fees do include depreciation of the capital over 10 years.

Articles 2D, E, G, H, J, 3A, C, D, 4, 5, 6 are ok.

Attached is a new MOU which contains our thoughts on dealing with the above issues. We must reach agreement on these business issues soon or the project will be delayed. It does not make sense to begin preparation of a contract until the business basis is agreed upon. Please let me have your thoughts on how to resolve these differences.

Regards,

Geoff Pratt

